E. C. No. 581

# ESTIMATES COMMITTEE (1968-69)

(FOURTH LOK SABHA)

## SEVENTY-SIXTH REPORT

## MINISTRY OF FOOD, AGRICULTURE, COMMUNITY DEVELOPMENT & COOPERATION (DEPARTMENT OF AGRICULTURE)

**Forestry**

LOK SABHA SECRETARIAT
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(1968-69)

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## INTRODUCTION

I, the Chairman, Estimates Committee, having been authorised by the Committee to submit the Report on their behalf, present this Seventy-sixth Report on the Ministry of Food, Agriculture, Community Development & Cooperation (Department of Agriculture)—Forestry.

2. The Committee took evidence of the representatives of the Ministry of Food, Agriculture, Community Development & Cooperation (Department of Agriculture) on the 16th and 17th October, 1968. The Committee wish to express their thanks to the Inspector General of Forests and other Officers of the Department of Agriculture for placing before them the material and the information they wanted in connection with the examination of the estimates.

3. They also wish to express their thanks to Shri K. P. Sagreiya, former President, Forest Research Institute and Colleges, Dehra Dun, for furnishing a memorandum on the subject to the Committee.

4. The Report was considered and adopted by the Committee on the 15th March, 1969.

5. A statement showing the analysis of recommendations contained in the Report is also appended to the Report (Appendix XI).

NEW DELHI;
*March* 28, 1969.
*Chaitra* 7, 1891 (*Saka*)

P. VENKATASUBBAIAH,
*Chairman,*
*Estimates Committee.*

# I. INTRODUCTORY

## A. Importance of forests

1.1. Forests occupy a vital position in the country's economy. Indian Forests as forests elsewhere fulfil two major functions, one for protective purposes and another for production of products and services. Under the category of protection, forests perform functions of most supreme and paramount importance to the nation. They retard run-off and allow ground water to accumulate to feed springs and wells, prevent or greatly reduce the danger of floods, distribute the water supply over a longer time period and prevent the loss of soil which is carried by rapid flow of water to streams causing silting of streams and clogging of harbours. They preserve the fertility of soil and make our hydro-electric schemes possible. Forests also have a beneficial effect on the surrounding climate. Forests also provide fuelwood and timber resources for railways, shipping, defence, agricultural implements, furniture and home construction. Many other forest products such as bamboo, gum, resin, tanning material, medicinal herbs, grass, *bidi* leaves, oils, honey *lac* etc. provide important raw materials for paper plywood match and other industries and afford employment to millions. Thus, forests are indispensable for national development. In the case of a predominantly agricultural country like India, the importance of forests and trees can hardly be exaggerated.

## B. History of Forest Development in India

1.2. As with any other nation, the history of the forests of India is linked with its political history and its demographic pressure. Political changes have led to new developments in the administration of forests as well. The two World Wars made enormous demands on forests and affected the progress of forestry on scientific lines. Even apart from the adverse effects of wars or political changes, with the passage of time the primeval forest has had to give place to well-managed forest estates or organised plantations. The demographic pressure, which has increased almost in geometric proportions, had made insidious inroads into forests. The vast land with its varied climatic and geological conditions, its different types of forests and its enormous population with its ever-increasing demands on the forests have all contributed to make the history of India's Forestry complicated and at the same time interesting.

*Forests in ancient India*

1.3. A peep into the past history shows what role forests played in the life of the people since the first embers of civilization were lit in this ancient land. There is evidence to show that even as long ago as 2000 B.C. a Dravidian civilization of a high order flourished in the country, with its roots in the far south, which apparently lived in consonance with the thick extensive forests and their wild life. The early Aryans were primarily a pastoral people, interested in agriculture. They cleared forests only in the areas in which they actually settled down. Being worshippers of nature, they preferred for their abode, and even for their educational centres, sylvan surroundings and inspiring landscape. The *Vedas,* the *Upanishads,* the *Aranyakas* and the *Puranas* throw certain light on the forest and forestry during those periods and their distribution and composition can be conjectured from the two great epics and main literary contributions of the post-Vedic period, namely, *Ramayana* and *Mahabharata.* In *Vishnudharmottarapurana,* mention has been made of eight forest divisions, *viz., Prachyavana, Karushavana, Dasarnakavana, Vamanavana, Kalesvana, Aparantakavana, Saurashtravana,* and *Panchnadavana.* Similarly, in the *Manasollasa,* we find mention of two other forest divisions, *Angireyavana* and *Kalingakavana.* The *Ramayana* and *Mahabharata* give attractive descriptions of forests like *Naimisharanya, Chitrakoot, Dandakaranya, Nandavana* and *Khandavavana.* Panini has mentioned that there were artificial forests too, such as, *Amaravana, Khadirvana, Osadhivana, Devdaruvana, Sirisvana, etc.*

1.4. It is said that there was considerable export of timber from India to distant countries. Stebbing mentions that, "for a considerable period the Arabs had possessed a powerful fleet in the construction of which teak was used; and the valuable sandalwood of South India had for many centuries found its way by the sea and land routes to the Western markets; as also had the satinwood, ebony and blackwood." It has been discovered that a beam in the palace of Nebuchadnezzar (604-562 B.C.) at Birs Nimrud, part of which is now exhibited in the British museum, and also in the second storey of the Temple of Moon-Good at Ur. rebuilt by Nebuchadnezzar and Nabonidus (555-538 B.C.) is of Indian Cedar. It is said that undoubtedly this wood was imported to Babylonia from India. Further, according to Wilkinson, the presence of indigo tamarind wood and other Indian products have been detected in tombs of Egypt.

*Period of Greek invasion and Mauryan Kingdom*

1.5. The Chronicles of Chinese pilgrims mention about dense Indian forests. Records relating to the invasion of Alexander in 327 B.C.

mention about dense Indian forests. Records relating to the invasion mention occurrence of almost impenetrable forest along the Indus. But the various parts of India were under different local rulers and there was no organized government over any considerable tract until the reign of Chandra Gupt Maurya (300 B.C.). In his days, there was a Superintendent of Forests, who was assisted by some staff. The protection of wild life in the forest areas was part of their duty. There were punishments for forest offences. The punishment for unauthorised killing of elephants was death. The forests of those days were classified as — (i) those set apart for the study of religion, (ii) reserved forests for the supply of forest produce, (iii) forests set apart for the grazing of the royal elephants, (iv) hunting ground of the Royalty, and (v) hunting grounds for the public. During the days of Ashoka, much importance was laid to the planting of trees along the roads and on camping sites. Growing of exotic medicinal plants was also encouraged.

*Forests in the Muslim period*

1.6. The Moghuls were not forest-minded as such, but they created exquisite gardens. Emperor Jahangir introduced the famous Chinar tree in the valley of Kashmir. The Moghuls were, however, interested in forests for hunting. They also evinced interest in the planting of trees along canals.

1.7. With the fall of Moghul Empire, the country was divided into a number of small kingdoms. Owing to the general political instability, many people abandoned cultivation in disturbed areas and resorted to remote forest areas. The increase in population also led to the clearance of more forests areas for agriculture. Shifting cultivation in the hills was also responsible for clearance of forest lands more than necessary. There was no organised interest in forest maintenance. Only specified species of timber value were proclaimed by local rulers as "Royal trees" and royalty was collected for the extraction of such trees. Otherwise, the forests were open to all and the public obtained their requirements without restriction.

*Forests during British period*

1.8. In the early years of British rule also, the large indents were made on the timber wealth of the country. The newly established British Administration in India was not alive to the need for careful husbanding of forest resources. As supplies of first class oak timber became short in England, large quantities of teak from India were used for the British Admiralty's fleet. Very soon, however, it became apparent to them that this was against their long term imperial interests and the need to work forests scientifically was felt.

1.9. In 1855, Lord Dalhousie, the Governor General promulgated for the first time an outline for forest conservancy for the whole country in a memorandum dated the 3rd August, 1855, which is termed as the "Charter of the Indian Forests."

1.10. The Governor General in his despatch dated the 1st November, 1864, to the Secretary of State pointed out to the need for (i) exercising great care in the disposal of waste-lands containing forests, (ii) demarcating and fixing the limits of forests to be preserved as such and (iii) enacting of comprehensive Indian Forest Act. As a result, Sir Dietrich Brandis was appointed as the Inspector General of Forests, India, to carry out an all-India policy in respect of forests. Under his guidance, Forest Departments were created in the various British Provinces.

1.11. As the first attempt at forest legislation, the Indian Forest Act came into being in 1865. Under the Act, the local Governments were empowered to draft local rules for enforcement in their respective regions. Steps were taken accordingly to prevent acts which caused injury or destruction to the forests. A revised Indian Forest Act providing for the constitution of reserved and protected forests was passed in 1878. In the same year, a Forest School was inaugurated at Dehra Dun. The first task that devolved on the forest officers was to inspect tree-clad lands and all hilly regions and then to demarcate, survey and map suitable areas for settlement as reserved or protected forests. After these forests were inspected by the Inspector-General of Forests along with the local forest officers, general principles were laid down on which they were to be managed.

1.12. At that stage, the Government of India invited Dr. Voelcker, a German expert, to examine the condition of Indian agriculture and to suggest how it could be improved. In his report submitted in 1893, Dr. Voelcker discussed the role of forests *vis-a-vis* agriculture and stressed the need for formulating a forest policy with a definite bias for serving agricultural interests more directly than before. Accordingly, the Government of India issued a resolution dated the 19th October, 1894, declaring their forest policy (Appendix I). The basic principles enunciated in this policy were:—

(i) The State forests were to be administered with the sole object of public benefit.

(ii) Forests on hill slopes were to be maintained as protection forests to preserve the climatic and physical conditions of the country and to protect the cultivated plains that lie below them from the devastating action of hill torrents;

(iii) Forests as were reservoirs of valuable timbers should be managed on commercial lines as a source of revenue to State;

(iv) Ordinarily a demand for culturable land which could be met from forest alone, should be excised subject to following conditions:—

(a) honey combing of a valuable forest by patches of cultivation should not be allowed;

(b) cultivation must be permanent and must not be allowed to an extent as to encroach upon the minimum area of forest that is needed to meet the reasonable forest requirements, present and prospective;

(v) Forests that yielded only inferior timber, fuelwood or fodder, or used for grazing, should be managed mainly in the interest of the local population, care being taken to see that user was not exercised so as to annihilate its subject.

(vi) State forests were classified with reference to their primary function as follows:—

(a) Forests the preservation of which was essential on climatic or physical grounds;

(b) Forests that afforded a supply of valuable timbers for commercial purposes;

(c) Minor forests; and

(d) Pasture lands. The above classification, however, was not intended to be rigid for a given forest might fulfill more than one function.

1.13. Faithful implementation of the above policy resulted in a steady development of the forests in the country. The best of them were managed under working plans prepared after detailed inspection and a thorough study of the locality factors and the demand. Efforts were also made to see that felled over forests were regenerated with valuable species and the new forest growth was protected and tended properly. There was some depletion of forest capital in World War I but this was more than made up by intensive conservation and management in subsequent years.

1.14. The Forest Act of 1878 was also replaced by a forest enactment in 1927 embodying more elaborate provisions relating to forests, transit of forest-produce and the duty leviable on timber and other forest produce.

1.15. During World War II, however, forests were heavily felled, far beyond their sustained production, with the result forest capital decreased considerably.

## C. Post-Independence Developments

1.16. During the interval that elapsed since the declaration of Forest Policy of 1894 till the advent of independence, many developments of far reaching importance took place. As stated above the country passed through a strenuous period dominated by the two World Wars disclosing unsuspected dependence of national defence on forests. The importance of forests was being recognised in the physical field such as conservation of moisture, prevention of erosion, and increase in rainfall and also in the economic field, like development of agriculture, industry and communications. Various reconstruction schemes involving industrial expansion, river valley projects, electricity schemes and development of communications were undertaken and naturally all of them leaned heavily on the produce of forests. With the growing population and the problem of rehabilitation of displaced persons also increased the pressure on forests and waste lands for agriculture and other rehabilitation schemes. Changes in the political field, *viz.* integration of Princely States, abolition of Zamindari System and the provision in the Constitution making 'Forests' exclusively a State subject, also called for an uniform and effective approach. Further the Sixth Conference of the Food and Agriculture Organisation held in Rome in November-December, 1951, adopted a resolution recommending to the Member Governments the adoption of principles governing the formulation and implementation of Forest Policy. The principles required *inter alia* determination of areas dedicated to forests, application of best practical techniques in seeking to derive in perpetuity the maximum production, protection and accessory values of forests, etc.

1.17. In view of the developments mentioned above, the Government of India in 1952 formulated the National Forest Policy (Appendix II) with the object of remodelling the management of Indian forests so that they could play an increasingly useful role in promoting national welfare. While the fundamental principles underlying the 1894 Policy are ever true and were therefore reiterated, Government of India thought it fit to lay greater emphasis on a number of other points. It proposed the classification of forests on a functional basis into protection forests, national forests, village forests and tree-lands. It emphasized the need for evolving a system of balanced and complementary land use, under which each type of land was to be allotted to that form of use under

which it would produce most and deteriorate least. The Policy considered it desirable to establish treelands wherever possible for the amelioration of the physical and climatic conditions, and for promoting the general well-being of the people. It also made provision for ensuring progressively increasing supplies of grazing, timber for agricultural implements and firewood to release cattle-dung for use as manure. The National Policy also contrived against the indiscriminate extension of agriculture by the excision of forests, as this not only deprives the local population of wood, grass, etc. but also deprives the land of its natural defences against dust storms, hot winds and erosion. It emphasized that the notion widely entertained that forestry has no intrinsic right to land but may be permitted on sufferance on residual land not required for any other purpose, has to be combatted. The role of forests, productive, protective and bioaesthetic, entitles them to an adequate share of land to promote public well-being and ensure balanced economy. The Policy also laid down that it would be the duty of the forester to awaken interest of the people in the development, extension and establishment of treelands wherever possible, and to make them tree-minded. The national forests were to be managed on the principle of progressively increasing and eventually the highest, sustained yield to meet the requirements of defence, communications and industry. It also emphasized the need for affording protection to wild life by its proper management for scientific study and for recreational purposes. The Policy also laid stress on (i) weaning the primitive people by persuasion, of the baneful practice of shifting cultivation; (ii) increasing the efficiency of forest administration by having adequate forest laws; (iii) giving requisite training to the staff of all ranks; (iv) providing adequate facilities for the management of forests and for conducting research in forestry and forest products utilisation; (v) controlling grazing in the forest; and (vi) the need for promoting the welfare of the people. All these principles and their implementation have been discussed in detail in another Chapter of this Report.

## II. ORGANISATIONAL SET-UP

### A. Extent of Central Responsibility

2.1. 'Forests' being a State subject, the primary responsibility in regard to forests rests with the respective State Governments. The Central Government is chiefly concerned with the formulation and implementation of the National Forest Policy, coordination of forest development activities, forest education at professional and sub-professional levels, research and training and coordination of measures of conservation of wild life.

2.2. As to the role played by the Centre in matters of Forest Administration, *viz.* forest budget, forest development plans and review of the progress made on various schemes, the Committee have been informed as follows:—

"In view of the fact that the protective influence of forests or deleterious results of deforestation extend far beyond the frontiers of individual States and in view of the large requirements of wood and wood products for industrial development, transport and communications and for defence purposes, the Central Government has also given special attention to the initiation of policy, so that the local pressures may not militate against the wider interests of the Nation. The National Forest Policy was enunciated in Government of India Resolution of May, 1952.

The Ministry of Agriculture in the Government of India coordinates forest activities in the country; but no forests are directly under its administrative control. The Department of Agriculture also arranges for the training of Officers for Indian Forest Service, Superior State Forest Services and Range Officers for all the States.

Three types of Schemes *viz.* (i) Central Schemes, (ii) Centrally-sponsored Schemes, and (iii) State Schemes are included in the Forest Development Plans.

The Central Schemes such as Research, Education etc. are implemented by the Central Government. These Schemes are finalised by the Forestry Wing in the Department of Agricluture.

Necessary budgetary provision for implementation of these Schemes is made in the Central Sector in the budget of Ministry of Food, Agriculture, Community Development and Co-operation. The executive organisation is under the direct control of the Union Ministry named above. The Forestry Wing receives quarterly progress reports from the organisation executing these schemes. These are examined and the progress is reviewed monthly by a Committee with Inspector General of Forests as its Chairman.

The Centrally-sponsored Schemes which are of national importance, are formulated by the Forestry Wing in the Department of Agriculture taking into consideration the requirements of various State Forest Departments and availability of funds. The schemes are executed by the State Forest Departments under the guide-lines laid down by the Department of Agriculture. The Central Government usually provides 100% Central assistance. Budget provision is made in the Ministry under "Grant and Loan to States." During Third Plan, the scheme on "Plantation of Quick Growing Species" was introduced as a Centrally-sponsored one. During Fourth Plan, it has been included as a State Scheme. Only one Scheme *viz.* "Forest Resources Survey" has been treated as a Centrally-sponsored one under the Fourth Five Year Plan. The procedure for review of progress made is the same as in the case of Central Schemes.

The State Forestry Schemes are executed by the State and Union Territories Forest Departments. The Central Government provides Central assistance for these schemes. The pattern of assistance is determined from Plan to Plan. The provision for these schemes is made in the budget of the State and Union Territory Governments. Sufficiently in advance of the start of a Five Year Plan, the Forestry Wing in the Department of Agriculture (Central Government) determines the Schemes to be included in that Plan. Broad guidelines for the formulation of Schemes are provided by the Centre. These are finalised after examining the draft proposals prepared by the Forest Departments and in consultation with the Planning Commission.

Every year the State and Union Territory Forest Departments send their proposals for State Forestry Schemes to be implemented in the next financial year. These are discussed at the

Working Group meetings in the Department of Agriculture which includes representatives of the respective States. Discussions are held for each State and Union Territory separately. The Working Group makes recommendations regarding effective implementation of these Schemes, outlay for each Scheme etc. The Development Plan of the State and Union Territory is, however, finalised on the basis of outlay approved by the Planning Commission, and the availability of State resources.

The Forestry Wing receives quarterly progress reports from the State Forest Departments in respect of important schemes. These are examined and the progress is watched."

2.3. In regard to the Central responsibility for forest development in the Union Territories, it has been stated that all the Heads of Local Administration enjoy the powers of the State Government under the Indian Forest Act and accordingly they are fully responsible for the administration and development of forests under them. However, matters which are not within the powers of the Heads of Local Administration, as defined in the Delegation of Financial Powers Rules, 1958, are referred to the Central Government. The Centre also scrutinises and approves the budget proposals of the Union Territories. Similarly, their development plans are discussed at the Central level in the Annual Plan Meetings, although detailed execution of the plans falls within the competence of the local administration. So far as the Union Territory of Andaman and Nicobar Islands is concerned, it has been stated that according to Government of India Allocation of Business Rules, 1961, the Central Government is charged with the responsibility of attending to all matters relating to the forests and forest administration there. The budget proposals of that Territory are included in Central grants.

2.4. During evidence, it has been confirmed by the representative of the Ministry that the Union Territories are treated in the same manner as the State Governments and that they have their own powers to administer the forests under them. It was also clarified that only those matters which were beyond the administrative or financial competence of the Administrators came to the Central Government.

**2.5. The Committee note that in the matter of forest development schemes the Ministry have been treating the Union Territories at par with the State Governments. The Committee, however, feel that the Central Government having been vested with the overall powers over the administration of these Territories and also because of their limited resources owe a special responsibility in regard to them. The Committee suggest that**

**the Forestry Wing at the Centre should as in the case of Andaman and Nicobar Islands take greater interest in the development of forests in the Union Territories, e.g. Himachal Pradesh, etc. which have large untapped forest resources so that the tempo of progress generated there, may serve as an example for the other States to emulate.**

## B. Administrative set-up

### (i) *At the Union Level*

2.6. Forestry forms a Wing of the Department of Agriculture of Ministry of Food, Agriculture, Community Development and Cooperation. The Inspector General of Forests in the Chief Technical Adviser as well as ex-officio Joint Secretary to the Government of India and is incharge of all matters (both technical and administrative) pertaining to forestry administration as a whole. He functions under the overall direction of Secretary (Agriculture) and the Minister of Food, Agriculture, Community Development and Cooperation. He is assisted in technical matters by a Deputy Inspector General of Forests, Secretary, Central Forestry Commission, one Assistant Inspector General of Forests each for Forest industries, Wild Life and General Matters, an Assistant Director (Statistics) and in administrative matters by an Under Secretary. There are three Sections dealing with Forest Research Institute and Forest Development programmes and a Statistical Cell headed by Assistant Director (Statistics). A Chart indicating the administrative set up of the Forestry Wing in the Department of Agriculture is given in Appendix III.

2.7. Forestry Wing of Department of Agriculture is responsible for laying down policies on all matters relating to forestry and its allied subjects, issuing instructions to its various subordinate offices for implementing the policies, formulation of Plan proposals, coordination of work with State Forest Departments, liaison work with international organisations in the field of forestry, preparation of agenda notes, minutes of meetings, and follow up action on the decisions/recommendations of the Central Board of Forestry and other Committees/Sub-Committees constituted by Government, making budget provisions for the various offices/schemes and for issuing financial sanctions etc. The work is done by the various Officers/Sections in the Department proper.

2.8. It has been stated during evidence by the representative of the Ministry that the present organisational set up is satisfactory and adequate to perform the functions and responsibilities falling within the Central sphere.

2.9. Each of the three Sections, designated as Forest Institute I Section, Forest Institute II Section and Forest Development Section, is in the

charge of a Section Officer. The strength of non-gazetted staff in these three Sections as well as in the Forestry Statistical Cell is 32 including one Technical Assistant (Forestry) (Selection Grade), one Research Investigator (Forestry), four Technical Assistants, one Technical Assistant (Wild Life Unit) and one Computor. In addition, there are 6 posts of Stenographers and one post of Steno-typist.

2.10. The technical qualifications required and the method of recruitment to the technical posts of officers and staff in the Forestry Wing are as given below:

| Name of the post | | Qualifications & Method of recruitment. |
|---|---|---|
| (1) Inspector General of Forests | 1 post | To be filled by deputation from Heads of the Forest Departments in the States and Union Territories and (ii) President, F.R.I. & Colleges, Dehra Dun. Hence no qualifications are laid down under the recruitment rules.<br>The post is a tenure post. |
| (2) Dy. I. G. Forests | 1 post. | To be filled by deputation from officers of the rank of Conservator of Forests in the Indian Forest Service in the States and Union Territories.<br>The post is a tenure post. |
| (3) Asstt. I.G.F. | 3 posts | To be filled by deputation from officers of the rank of Deputy Conservator of Forests in the Indian Forest Service with at least 5 years' experience as a District Officer and preferably possessing all India knowledge of Forests and Forest Products.<br>The posts are tenure posts. |
| (4) Asstt. Director (Forest Statistics) | 1 post | To be filled from an officer of the Indian Statistical Service. The post is to be encadred in Indian Statistical Service. |
| (5) Secretary, Central Forestry Commission | 1 post | The post is to be filled by deputation of suitable officer of the Indian Forest Service.<br>The post is a tenure post. |

| Name of the post | Qualifications & Method of recruitment | |
|---|---|---|
| (6) Technical Assistant (Forestry) (Selection Grade) . . 1 post. | (i) Degree or Diploma in Forestry from a recognised University/Instt.<br>or<br>Forest Ranger Certificate from Dehra Dun/Coimbatore.<br>(ii) About 3 years' experience in forestry work. | By direct recruitment failing which by transfer. |
| (7) Research Investigator (Forestry) . 1 post. | (i) Graduate preferably in Economics or Statistics.<br>(ii) Five year experience of<br>(a) Collection and analysis of forest-data;<br>(b) Scrutiny of Plan development schemes in the forestry sector;<br>(c) General Secretariat work in technical field.<br>(iii) Experience of compilation of forestry survey report. | By promotion from amongst the Technical Assistant (Forestry) with 3 years service in that grade; failing which by direct recruitment. |
| (8) Technical Assitt. 4 posts. | (i) Graduate in Economics or Statistics<br>(il) Experience in rural statistics, data collection and analysis and general documentation or field work.<br>or<br>(i) Graduate in Science preferably in Boloney.<br>(li) 3 year's experience in the field of forestry or allied subjects.<br>or | Direct recruitment. |

| Name of the post | | Qulifications & Methods of recruitment | |
|---|---|---|---|
| | | (i) Graduate from a recognised University. | |
| | | (ii) Forest Rangers' Certificate from a recognised Institute. (Depending on the particular post to be filled). | |
| (9) Technical Assistant (Wild Life Unit) | 1 post. | (i) Degree in Science preferably in Zoology. | Direct recruitment. |
| | | (ii) Experience of conducting field survey in Zoology. | |
| (10) Computor | | (i) Degree in Mathematics. or Degree in Statistics, Economics, Commerce, Science with Mathematics as one of the subjects during college career. | By direct recruitment failing which by transfer of person working in equivalent or similar posts from other Central Government Officer/Deptt. |
| | | (ii) Experience of computation work. | |

**2.11. The Committee find that the strength of technical staff vis a vis administrative staff in the Forestry Wing is only about twenty-five percent. The Committee consider that in view of the fact that the bulk of the work in the Wing is of a technical nature requiring special background knowledge of forestry, the proportion of the technical staff should be higher in order to ensure its more effective functioning and the administrative staff should be reduced to the minimum. They would, therefore, like that the staffing pattern is reviewed in the light of the above observation.**

**The Committee further recommend that special background knowledge of forestry and practical experience of forests should be prescribed as an essential qualification for the technical posts and as a desirable qualification for the administrative posts in the Forestry Wing to be filled either by promotion or by direct recruitment and suggest that**

**the rules regarding recruitment/promotion to these posts may be modified wherever necessary.**

(ii) *In the States and Union Territories*

2.12. In most of the States and Union Territories there are separate Forest Departments. However, in some the Forestry forms a part of the Department of Agriculture and in others a part of the Revenue Department. State Legislatures control the forest budget of the States.

2.13. The Head of the Department is called the Chief Conservator of Forests except in Tripura, Goa, Daman and Dieu and NEFA where he is of the status of a Conservator of Forests and in Manipur and Dadra and Nagar Haveli of the status of a Deputy Conservator of Forests. In Maharashtra and West Bengal there is an Additional Chief Conservator of Forests. In some States, there are one or two Deputy Chief Conservator of Forests. In most of the States, there are one or two officers of the rank of Deputy Conservators of Forests in the office of the Chief Conservator of Forests to assist him in the office work.

2.14. In each State the forests are organised into Circles which are under the charge of Conservators. These in turn are divided into Forest Divisions in charge of Deputy Conservators or Assistant Conservators. The Forest Divisions are constituted by a number of Ranges each in charge of a Forest Ranger. Ranges in turn are sub-divided into Sections or Rounds in charge of Foresters. Beats are the smallest units in charge of Forest-Guards.

## C. Central Board of Forestry

*Genesis*

2.15. The Central Board of Forestry is the successor to the Board of Control which was set up in the late nineteenth century under the chairmanship of the Inspector-General of Forests for ensuring adequate standards in the training of forestry imparted at the Forest School at Dehra Dun. In those days membership of the Board was confined to three Conservators of Forests invited by the Chairman by rotation. In 1906, when the Forest Research Institute came into being, the scope and the functions of the Board of Control were enlarged and representation on it was extended to include all erstwhile British Provinces, not excluding Coorg. In addition, some of the senior officers were also invited to attend the meetings of the Board. With the introduction of the Montford Reforms in 1921, under which the administration of forests became a transferred subject, doubts were expressed regarding the advisability of continuing the Board. Opinion elicited from the various provinces in the matter, the Board. Opinion elicited from the various Provinces in the matter, that it acted as a forum for the exchange of experience, as a clearing house

of information, and as a co-ordinating agency for forest research, education, and standardization of forest practices and forest produce. It was also felt that an all-India Organisation such as the Board of Forestry was calculated to break down narrow provincialism, forge a common bond between the foresters of the country, and instil in them an *esprit de corps* and engender an integrated outlook.

2.16. After independence, the need for setting up a central forest organisation to suit the altered conditions was voiced at the Conference of the State Ministers held on September 8 and 9 in 1948. It was in pursuance of the recommendations of that Conference that the Central Board of Forestry was reconstituted in June, 1950 at the ministerial level in the belief that its deliberations will evoke universal response, inspire public confidence and win country-wide support.

*Aims and Objects*

2.17. The broad aims and objects of the Central Board of Forestry are contained in the following preamble to the Government of India (Ministry of Agriculture) Resolution No. 6-20|49-F dated 19-6-50 as amended by Ministry of Food and Agriculture Resolution No. F-6-30|51-F- dated 7-7-52 constituting the Board:—

> "With a view to ensuring an all-India angle in the integration of forest policy pursued by various States, the Government of India have had under consideration the need of constituting a Central Board of Forestry in the light of recommendation made by the Conference of Ministers of States, held at New Delhi, in September 1948. Quite apart from acting as a common pool of experience gained throughout the Union, the Board will serve to secure close coordination in forestry matters and more specially in integrated and use, and help in maintaining adequate standards in forestry education. In addition, it will stand in good stead in forging a common bond between the aims and ideals inspiring the various Forest Departments of the Union. With the urge for the industrial and agricultural development of the country generated by recent constitutional changes, forestry has come to assume a vital role calling for concerted action in such inter-State matters as soil conservation and flood-control measures, development of industries and standardization of timbers, evolution of forest management and legislation for the control of private forests, regulation of river valleys and preservation of tree growth in headwaters."

*Composition*

2.18. The present composition of the Board is as given below:—

| | | | |
|---|---|---|---|
| 1 | Union Minister for Food and Agriculture or in his absence Union Minister of Agriculture. | — | Chaiman |
| 2 | Minister-in-charge of Forests | Andhra Pradesh | Member |
| 3 | Do. | Assam | ,, |
| 4 | Do. | Bihar | ,, |
| 5 | Do. | Gujarat | ,, |
| 6 | Do. | Jammu & Kashmir | ,, |
| 7 | Do. | Kerala | ,, |
| 8 | Do. | Madhya Pradesh | ,, |
| 9 | Do. | Madras | ,, |
| 10 | Do. | Maharashtra | ,, |
| 11 | Do. | Mysore | ,, |
| 12 | Do. | Orissa | ,, |
| 13 | Do. | Punjab | ,, |
| 14 | Do. | Rajasthan | ,, |
| 15 | Do. | Uttar Pradesh | ,, |
| 16 | Do. | West Bengal | ,, |
| 17 | Do. | Himachal Pradesh | ,, |
| 18 | Do. | Tripura | ,, |
| 19 | Do. | Manipur | ,, |
| 20 | Do. | Pondicherry | ,, |
| 21 | Executive Councillor/Minister/in-charge of Forests. | Nagaland | ,, |
| 22 | Lt. Governor or Forest Minister (as and when the Ministry is formed). | Goa, Daman & Diu | ,, |
| 23 | Adviser to the Governor of Assam (Representing North Eastern Frontier Agency). | N.E.F.A. | ,, |
| 24 | Chief Commissioner, Delhi . . . . | | ,, |
| 25 | Chief Commissioner, Andaman & Nicobar Islands | | ,, |
| 26 | Secretary, Ministry of Food and Agriculture (Deptt. of Agriculture). | | ,, |
| 27 | Additional Secretary, Incharge of Forests, Ministry of Food and Agriculture, C.D. & Coop. (Department of Agriculture). | | ,, |

| | | |
|---|---|---|
| 28 | Inspector General of Forests . . . | Member |
| 29 | President, Forest Research Institute & Colleges Dehra Dun. | ,, |
| 30 | Secretary, Central Forestry Commission is the Secretary of the Board. | ,, |

*Functions*

2.19. The functions of the Board are as follows:—

1. Coordination and integration of forest policy pursued by States in the management of their forests.
2. The adoption of conservation measures affecting forest resources and soil.
3. Integration of plans for land use and national reconstruction in which forestry has come to play a progressively important role.
4. Promotion of legislation considered necessary for various States for the management of private forests.
5. Regulation and development of forests in inter-State river valleys, which are the concern of the Central Government (*vide* item No. 56 in the List I of the Seventh Schedule of the Constitution of India).
6. Maintenance of adequate standards of the training of Officers.
7. Co-ordination of forest research conducted in Central and State Institutes.
8. Any other matters affecting forestry which are germane and relevant to the objective of this Board.

The Board is stated to be the highest policy recommending body to Government.

*Standing Committee*

2.20. The Central Board of Forestry at its second meeting held in 1953 decided to constitute a Standing Committee mainly to assess the progress made in the implementation of the recommendations of the Board. In 1958, the Standing Committee was reconstituted as follows:—

(1) Union Minister for Cooperation—Chairman (2) to (6) one State Minister for Forest from each of the following five zones (to serve on the Committee for one year in rotation).

Zone 1—Jammu and Kashmir, Punjab, Himachal Pradesh and Rajasthan.

Zone 2—Uttar Pradesh and Madhya Pradesh.

Zone 3—Bihar, Orissa, Bengal and Assam.

Zone 4—Andhra Pradesh, Madras and Kerala.

Zone 5—Mysore and Maharashtra.

(7) Inspector General of Forests. (8) Secretary to Central Board of Forestry (who is also the Secretary to the Standing Committee).

The functions of the Standing Committee are—

(i) to assess the progress made in the implementation of recommendations of the Board;

(ii) to consider any difficulties experienced by State Governments and make recommendations to them as well as to the Central Government with reference to the concerned resolution of the Board;

(iii) to appoint special committees as may be found necessary for any of the above purposes or for studying any connected question;

(iv) generally to assist in the fulfillment of the functions of the Board.

*Meetings*

2.21. The rules of business of the Board initially stipulated that the Board should meet at least once in two years. Subsequently in 1959 it was decided that the Board should meet once every year. However in actual practice the Board has met as follows:—

| No. of meeting | Dates when meeting held | Place of meeting |
|---|---|---|
| First . | 7th to 9th May, 1951 | Dehra Dun (U.P.) |
| Second . | 3rd to 7th June, 1953. | Dehra Dun |
| Third . | 12th to 14th May, 1955 | Madras |
| Fourth . | 13th to 16th December, 1957 | Shillong (Assam) |
| Fifth . | 14th to 16th May, 1959. | Panchmarhi (M.P.) |
| Sixth . | 29th to 30th December, 1969. | Bhubaneshwar (Orissa) |
| Seventh . | Ist to 2nd October, 1962. | Dehra Dun |
| Eighth . | 27th to 28th December, 1963. | Trivandrum (Kerala) |
| Ninth . | 20th to 22nd January, 1965. | Ranchi (Bihar) |
| Tenth . | 15th to 16th October, 1966. | Simla (H.P.) |
| Eleventh . | 7th to 9th June, 1968. | Bangalore (Mysore) |

2.22. The Committee have been informed that the minutes of the meeting of the Board held at Banagalore in June, 1968 are still under preparation.

2.23. The Standing Committee is scheduled to meet at least once in between every two consecutive meetings of the Board. So far the Standing Committee has held the following meetings:—

| No. | Date | Place of meeting |
|---|---|---|
| 1 | 12th to 14th February, 1954 | Datia (V.P.) |
| 2 | 2nd to 3rd August, 1954 | Poona (Maharashtra) |
| 3 | 9th to 11th January, 1956 | Udaipur (Rajasthan) |
| 4 | 7th to 11th June, 1956 | Srinagar (J & K) |
| 5 | 22nd to 24th September, 1958 | Mussoorie (U.P.) |
| 6 | 10th to 14th January, 1960 | Trivandrum (Kerala) |
| 7 | 10th to 11th January, 1962 | Bhopal (M.P.) |
| 8 | 11th to 12th June, 1963 | Sringar (J & K) |
| 9 | 29th to 30th June, 1964 | Poona (Maharashtra) |
| 10 | 21st to 23rd April, 1966 | Shillong (Assam) |
| 11 | 18th to 19th September, 1967 | Bhopal (M.P.) |

*Attendance*

2.24. The attendance at the meetings of the Central Board of Forestry held during the last five years is as indicated below:—

| Meeting of the Board | Total Membership of the Board | Total No. of members present at the meeting | No. of the membership of State Ministers | No. of State Miniters present at the meeting |
|---|---|---|---|---|
| Eighth (1963) | 30 | 17 | 21 | 12 |
| Ninth (1965) | 30 | 15 | 21 | 10 |
| Tenth (1966) | 30 | 12 | 21 | 8 |
| Eleventh (1968) | 30 | 14 | 21 | 11 |

2.25. Explaining the reasons due to which the meetings of the Board or the Standing Committee could not be held according to schedule, the representative of the Ministry stated during the evidence as under:—

> "Initially when the Board of Forestry was constituted, it was to meet once in two years. The first five meetings of the Board were accordingly held. It was only afterwards, that is in 1959, that the Board decided to meet once a year. The meetings of the Board were however held in 1965, 1966 and 1968. But, it seems that the meetings were held before the expiry of two years. Generally the meetings are held in different States. I could give you an example of what has happened last year. The Andhra Pradesh Government at the last meeting held at Simla in 1966, said that it would play host in 1967. But they wrote to us in November, 1967 that they were very sorry that their resources did not permit them to play host. They should have held the meeting in November or December, 1967. In January, we had the Commonwealth Forestry Conference. In the meanwhile, we met the Minister from Mysore Government who said that they would invite us. They took four months to invite us. And so, the meeting was held in June, that is nearly after one and a half year. This little gap does take place. . . ."

**2.26. The Committee consider the association of Ministers in charge of forests in the States/Union Territories as members of the Central Board of Forestry, which is mainly responsible for the coordination and integration of policies for the development of forests—a State subject, an ideal arrangement. They have no doubt that before long the new State of Haryana will also be represented on the Central Board of Forestry.**

**The Committee find that the meetings of the Board are not being held regularly every year since 1959 as was decided by the Board. Against 9 meetings which should have been held since then, only 6 meetings have been held so far. The Committee are not convinced by the reasons advanced by the representative of the Ministry regarding the delays in holding the meetings of the Central Board of Forestry. They feel that the holding of the meetings of the Board should not be dependent on the convenience of a particular State Government to play host. It is the duty of the Standing Committee and Ministry to ensure that the meetings of the Board are held annually for which advance action should be taken to avoid delays. They hope that this will be done in future.**

2.27. The Committee would like to stress that there should be no delay in the preparation of minutes which form the basis of further action on the deliberations of the Board.

2.28. The Committee further note that out of 21 State Ministers, who are members of the Board, only 10, 8 and 11 have been able to attend the last three meetings of the Board. As the meetings of Central Board of Forestry which is composed of Ministers from the States/Union Territories, provide a very useful forum for the discussions of the various problems, policies and schemes relating to the development of Forestry in the country, it would be advantageous if a larger number of Ministers incharge of forests from the States/Union Territories attend the meetings of the Board. The Committee therefore suggest that the meetings of the Board should be arranged in such a manner that the maximum number of members are able to attend.

2.29. The meetings of the Standing Committee of the Central Board of Forestry which is required to assess the progress made in the implementation of the recommendations of the Board, appear to have been held rather erratically. There seems to be no well thought out plan to fix the meetings of the Standing Committee between the two meetings of the Board. The Committee feel that the meetings of the Standing Committee should be spaced in such a manner that sufficient time is given to the States to implement the recommendations of the Board.

## D. Central Forestry Commission

*Composition and Functions*

2.30. The Central Forestry Commission was set up by a Resolution of the Government of India dated the 25th August, 1965 for effecting technical coordination, disseminating information and collection of statistics on forestry. The composition of the Commission is given below:—

*Chairman*:—Inspector General of Forests, Ministry of Food and Agriculture (Department of Agriculture).

*Members*:—Four Members—One member drawn from each of the undermentioned regions:

(a) *Eastern Region*:—Assam, West Bengal, Bihar, Nagaland and Orissa and the Centrally-administered areas of Manipur, Tripura, NEFA and Andaman and Nicobar Islands.

(b) *Northern Region*:—Uttar Pradesh, Punjab, Himachal Pradesh and Jammu and Kashmir.

(c) *Western Region*:—Gujarat, Maharashtra, Rajasthan, Madhya Pradesh and Goa,

(d) *Southern Region*:—Madras, Mysore, Kerala and Andhra Pradesh.

The members are serving officers of the rank of Chief Conservators of Forests and are drawn from each region by rotation. They are on the Commission generally for a period of three years.

2.31. The following are the functions of the Commission:

1. To study the implementation of the National Forest Policy by the State Governments and Union Territories Administrations and to make suggestions where necessary;

2. To make suggestions, if any, for improvement in the preliminary stage of the major Working Plans of the States and Union Territories;

3. To collect, standardise and publish statistics relating to forestry;

4. To pool and disseminate technical information on forestry derived from States and foreign countries;

5. To conduct market studies on timber and other forest products and their utilisation;

6. To provide liaison between the Central Soil Conservation Board, the Advisory Board on Research, the River Commission, the Central Flood Control Board and other agencies whose work has a direct or indirect bearing on forests and forest developments;

7. To render assistance and technical advice in the implementation and evaluation of the forestry development programmes in the States and Union Territories.

2.32. The Committee have been informed that although the proposal to form a Commission composed of experts was approved by the Central Board of Forestry as back as 1955, it came into existence only a decade later. The Forestry Commission was originally envisaged to have effective control and coordination in the field of forestry. Technical coordination and advice were also listed as some of its imprtant functions. During this period of over ten years, the proposal was drawn up in varying forms and discussed at different levels. The history of all these stages as given in a written note furnished by the Ministry is summarised as under:—

In 1955 while formulating proposals on forestry development for inclusion in the Second Five Year Plan, the need for a Central agency to coordinate forestry activities in the country was recognised. The following functions were envisaged for the Commission:

(a) Scrutiny of major working plans in the States and of deviations from their prescriptions and technical assistance in yield regulation and in enumerations;

(b) collection, standardisation and timely publication of forestry statistics;

(c) market studies;

(d) pooling and dissemination of technical information derived from States and foreign countries;

(e) extension work;

(f) liaison with the Central Soil Conservation Board, the River Commission and Flood Control Board;

(g) development of forest research and forest education; and

(h) promotion of the use of secondary timbers by preservative treatment and seasoning.

The Central Board of Forestry at their meeting held at Ootacamund in May, 1955 considered the proposal and adopted the following resolution:—

"Having regard to the recommendation of the Planning Commission for ensuring a uniformly high technical standard through a Central agency in the preparation of working plans, the Central Board of Forestry approves the idea of entrusting to the proposed Forestry Commission the task of scrutinising the prescriptions of major working plans of States and deviations therefrom.

The Board also feels that special emphasis should be laid on evolving a procedure in scrutinising these plans, which would avoid delays."

Under the proposed constitution, the Inspector General of Forests was to be the Chairman of the Commission with three whole-time Commissioners and three whole-time Deputy Commissioners and other staff. The Commissioners were to be recruited from among the retired Chief Conservators of Forests. The Commission was to have a Governing Body, an Advisory

Body, an Administrative Committee and a Finance Committee. The Second Plan cost of the project was worked out at Rs. 20 lakhs (Rs. 4 lakhs per annum). The functions of the Commission as originally proposed were reconsidered and it was felt to confine them to the (i) review of forest policy and plan from time to time, (ii) application of the policy and plan in the States, and (iii) coordination between different States and general supervision. It was also considered that the functions of the Commission *vis a vis* States would be similar to those of Advisers of the Planning Commission and no executive functions were assigned. The Planning Commission agreed to the proposal. The proposal was discussed by the Expenditure Finance Committee. It was agreed that the Inspector General of Forests did need some technical assistance to be able to effectively advise the States and the Central Government on matters relating to Forestry and Soil Conservation. However, the Ministry of Finance did not favour the proposal as they felt that 'Forests' was a State subject and that the forestry schemes were finalised in consultation with the Planning Commission. In addition, the Central Board of Forestry and its Standing Committee provided the forum for consideration of common problems. Ultimately, the proposal was dropped in 1957.

At the Pachmarhi meeting of the Central Board of Forestry held in May, 1959, the following Resolution was adopted:—

"On a general desire expressed by the State Governments, the Government of India be invited to consider the appointment of a body consisting of technical and non-technical persons for making an assessment and evaluation of forest development activities in the various States and for rendering necessary advice for improvements."

In view of the lack of unanimity of views expressed by State Governments to the above proposal and other developments, the matter was deferred.

In July, 1961, it was again decided to refer the matter to the Central Board of Forestry. The Board discussed the issue at its meeting held in October, 1962 at Dehra Dun and accepting the proposal in principle appointed a sub-Committee to examine the proposal. The Sub-Committee recommended in June, 1963 the formation of the Commission. The Central

Board of Forestry at its meeting held at Trivandrum in December, 1963, approved the recommendation as follows:—

The recommendation was accepted. The Forestry Commission will be a technical sub-Committee servicing the Central Board of Forestry. It was also decided that the whole question may be reviewed after the Commission has functioned for two years.'

Accordingly, Minister's approval to the creation of the following posts was obtained on 12-3-1964:—

1. Secretary of the Commission of the status of a Conservator of Forests.
2. One Technical Assistant.
3. One Stenographer.
4. One Lower Division Clerk.

After getting necessary clearance of the Finance Ministry etc. the Government Resolution setting up the Commission was issued on 25-8-1965.

2.33. In this connection, in the Second Five Year Plan it has been stated:—

"It is recognised that in order to achieve well-planned development of forest resources all over the country, coordination of the activities of the States and the Centre is desirable. The Central Board of Forestry concerns itself with the various problems arising in India's forests and provides over-all guidance. It is necessary that development work as well as working plan preparation and forest management should be coordinated on a comprehensive scale under a continuing whole-time organisation. It is therefore essential to set up and maintain a well organised service for technical advice and assistance at the Centre. Such an Organisation could also make itself responsible for improved forest statistics, market studies and statistical information, for the standardisation of grading work with reference to timber and other forest produce and for the technical efficiency of all forestry practices in the country. It is therefore proposed to set up a Forestry Commission for coordination of forest development and management."

2.34. The representative of the Ministry explained during evidence that the Sub-Committee recommended the present small set up of the Commission, with Inspector General of Forests as the Chairman and one

full-time Secretary, as it saw little hope of the original proposal for a full-fledged Commission going through.

*Staff strength*

2.35. The Commission has been provided with one Tehnical Officer, who is the Secretary, and the staff consisting of one Technical Assistant, one stenographer and one Lower Division Clerk. The Commission forms part of the Forestry Wing of the Department of Agriculture.

*Meetings*

2.36. The Commission is scheduled to meet once in three months. So far only three meetings of the Commission have been held—on the 28th May, 1966, 22nd April, 1967 and 26th September, 1967. In addition four regional meetings of the Commission have been held at Bhopal from 23rd to 24th August, 1966, at Dandeli (North Kanara) on 6th and 7th September, 1966, at Simla on 14th October, 1966 and at Calcutta from 7th to 9th January, 1967 for Western, Southern, Northern and Eastern regions, respectively.

*Activities*

2.37. Asked about the activities of the Central Forestry Commission since its inception, it has been stated that the following important forestry topics were discussed in the meetings of the Commission:—

(i) Preparation of uniform working plan code.

(ii) Measures for effective fire protection.

(iii) Preparation of maps and surveys.

(iv) Establishment of Statistical, Planning and Evaluation Cells in the State Forest Departments.

(v) Revision of draft proformae for collection of forest statistics.

(vi) Dissemination of technical information on forestry.

II. *Preparation of Publications and Technical Notes*

(i) Progress Report of India (1960-65) prepared for the Ninth Commonwealth Forestry Conference.

(ii) Forestry in India, prepared for the Ninth Commonwealth Forestry Conference.

(iii) National Progress Report on Forestry, prepared for the Eighth Session of the Asia-Pacific Forestry Conference.

(iv) Country Report of India on woodbased industries.

(v) Five Statistical Bulletins dealing with Forestry Statistics.

(vi) Fourteen technical notes.

III. *Standardization of Statistical Forms*

Based on the requirements of the Food & Agriculture Organisation and other Organisations, draft proformae for forest statistics have been prepared and circulated to the State Forest Departments for their comments.

*Review*

2.38. The Committee enquired whether any review of the working of the Central Forestry Commission after it had functioned for two years has been made—as was decided by the Central Board of Forestry at the time of approving its creation. The representative of the Ministry stated during evidence that they will now be taking it up.

2.39. From the various proposals initially put forward for the creation of the Central Forestry Commission, it is apparent that a number of functions proposed to be assigned to the Commission fell within the purview of the Central Board of Forestry, Forest Research Institute & Colleges, Dehra Dun, and other organisations. Further, the structure suggested for the Commission on the lines of the Central Water and Power Commission, was too heavy. The Committee feel that had these proposals been sponsored with precisely defined functions and with a simple structure to suit the requirement of providing technical assistance to the Central Board of Forestry and other Central Ministries and the States/Union Territories on matters relating to forestry and soil conservation, the delay of about 10 years in this regard could have been avoided.

2.40. The Committee regret that the Commission has not made much headway in the fulfilment of the various functions which have been assigned to it. It has not held its meetings quarterly as scheduled. Since the setting up of the Commission in 1965, it has held only three meetings so far, in addition to the four regional meetings. This itself indicates the unsatisfactory working of the Commission. Further, no review of the working of the Commission after two years of its constitution, has been made as recommended by the Central Board of Forestry. The Committee recommend that a comprehensive review of the working of the Commission should be made without any further delay by a Review Committee, consisting of a few serving and retired technical personnel. The review should inter alia cover matters like functions to be assigned to such a body, the organisational set up best suited for the purpose of speedy and

efficient execution of those functions, avoidance of over-lapping with other organisations etc. In this context, the Committee would suggest that the feasibility of entrusting functions, such as pooling and dissemination of technical information on forestry and carrying out market studies on timber and other forest products, to the Forest Research Institute and Colleges, Dehra Dun where work of similar nature is already being done, may also be examined by the Review Committee.

### E. National Popular Commission

2.41. The National Poplar Commission was established by the Government in 1965. Its composition is the same as that of the Central Forestry Commission which in fact is also functioning as the "National Commission for Poplar and other fast growing species" with effect from the 17th September, 1965. The functions of the Commission are:—

1. To study the scientific, technical, social and economic aspects of Eucalyptus, Poplar and Willow cultivation and of any other fast growing varieties.
2. To promote the exchange of ideas and material between research workers, producers and users of these species.
3. To arrange joint research programmes.
4. To arrange study tours.
5. To report on the progress made in India and to make recommendations to the International Poplar Commission.
6. To make recommendations to the State Governments on the development of poplars and willows on scientific lines.

2.42. The Commission has so far held one meeting on the 26th September, 1967. It was agreed at the meeting that the State Silviculturists concerned with the cultivation of poplars should work in close collaboration, meet and discuss common problems in addition to exchange of notes and reports on the subject.

2.43. It has been stated that with India having become member of the International Poplar Commission, it has been possible to obtain technical know-how about their cultivation as well as seeds and different kinds of clones of poplars. In June, 1967, 86 packets of poplar seeds were received from the International Poplar Commission. Useful research regarding their germination, cultivation and propagation is being conducted at the Forest Research Institute, Dehra Dun. The State Forest Departments have also been evincing keen interest in poplar cultivation. In the hills, particularly in Jammu and Kashmir, and in Himachal Pradesh and Uttar Pradesh, a number of clones are under trial. In the plains, nursery trials have been conducted in the States of Andhra Pradesh, Assam, Bihar,

Orissa, Gujarat, Maharashtra, Madhya Pradesh, Mysore, Uttar Pradesh and West Bengal. Large scale industrial plantations of poplars are proposed to be raised after results of experimental trials are known.

2.44. The National Poplar Commission arranged study tour and symposium on Eucalyptus, Poplar, Willow and Conifer. Under this programme, the States of Rajasthan, Haryana and Uttar Pradesh were visited in November, December, 1967 and the States of Punjab, Himachal Pradesh and Jammu and Kashmir in June-July, 1968.

**2.45. The Committee note that in Europe and other countries, poplar cultivation has been found very successful and its timber has proved useful to match, plywood and pulp factories. In view of the fact that poplars have important commercial value, the Committee consider that full encouragement should be given to the growing of these species in different States/Union Territories where suitable conditions exist. The Committee urge that full benefit should be taken of the membership of the International Poplar Commission and that the National Poplar Commission should be activised so that it is able to perform the functions assigned to it effectively.**

## F. Indian Forest Service

2.46. Following the recommendations of the States Re-organisation Commission and in consultation with the State Governments, an All-India Forest Service has been re-constituted with effect from the 1st July, 1966, under the provision of the All-India Services Act, 1951.

**2.47. The Committee hope that the re-constitution of Indian Forest Service will promote esprit de corps in the Forest Service and also accelerate the pace of integration of Forest Policy.**

## III. NATIONAL FOREST POLICY

3.1. As stated earlier, the main principles governing the management of forest resources and their continued development were laid down by the National Forest Policy Resolution, 1952. The Resolution *inter alia* stressed that the following vital needs which were to be fulfilled by the forests provided the fundamental basis of the Policy governing their future:—

(1) need for evolving a system of balanced and complementary landuse, under which each type of land is allotted to that form of use under which it would produce most and deteriorate least;

(2) the need for checking;

(a) denudation in mountainous regions on which depends the perennial water supply of the river system whose basins constitute the fertile core of the country;

(b) the erosion progressing apace along the treeless banks of the great rivers leading to formation and vast stretches of undulating wastelands depriving the adjoining fields of their fertility;

(c) the invasion of sea sands on coastal tracts and the shifting of sand dunes, more particularly in the Rajputana desert;

(3) the need for establishing treelands, wherever possible, for the amelioration of physical and climatic conditions promoting the general well-being of the people;

(4) the need for ensuring progressively increasing supplies of grazing, small wood for agricultural implements and in particular of firewood to release the cattledung for manure to step up food production;

(5) the need for sustained supply of timber and other forest produce required for defence, communications and industry;

(6) the need for the realisation of the maximum annual revenue in perpetuity consistent with the fulfilment of the needs enumerated above.

### A. Forest Area

3.2. One of the major objectives of the National Forest Policy, 1952 was that the country as a whole should aim at maintaining one third of its

total land area under forests. The figures of land utilisation in the country, as on 1-4-1965 as given in Forestry in India (1967) * are given below:—

| Category | Area (Million hectares) | Percentage |
|---|---|---|
| 1. Agriculture . . . | 154 | 47·2 |
| 2. Forestry | 73 | 22·3 |
| 3. Potentially productive barren land | 56 | 17·2 |
| 4. Not available for agriculure or forestry . | 44 | 13·3 |
| Total land area . . . | 327 | 100·00 |

It will be seen that the extent of forest area in the country was about @73 million hectares which came to only 22.3 per cent of the total geographical area.

3.3. The statistics of the area under forests in the country in 1951-52 and the progress made therein since then are indicated below:—

| Year | Thousand hectares | | Percentage of forest area to land area |
|---|---|---|---|
| | Land area as on 1-1-1966 | Area under forests | |
| 1 | 2 | 3 | 4 |
| 1951-52 . . . . . | | 73,444 | 22·5 |
| 1952-53 . . | | 72,686 | 22·2 |
| 1953-54 . | | 72,710 | 22·2 |
| 1954-55 . | | 72,225 | 22·1 |
| 1955-56 | | 70,366 | 21·5 |
| 1956-57 . . | | 70,615 | 21·6 |
| 1957-58 . . . . . | | 71,073 | 21·7 |

*Forestry in India, 1967, page 7 (published by the forest Research Institute and College, Dehra Dun).

@According to the statistics furnished by the Ministry in a written reply, the area under forest during 1964-65 was 75,332 thousand hectares (23·1% of the total land area). Explaining the variation in this figure and that given in 'Forestry in India (1967)', the Ministry at the time of factual verification stated as : Total area under forests in India *viz.* 73 million hectares during 1964-65 was based on the figures furnished by the State Forest Departments for preparation of the Progress Report of India 1960-65 for the Ninth Commonwealth Forestry Conference, 1968. Subsequently State Forest Departments particularly Assam & Maharashtra have furnished revised figures of area under forests during 1964-55 collected in connection with the preparation of the Progress Report of India for Asia Pacific Forestry Commission, 1968. The revised all-India area under forests during 1964-65 was estimated at 75.3 million hectares and the same has been communicated to the Estimate Committeev *ide* written reply to post evidence point 4 (b).

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 1958-59 | 3,26,809 | 69,907 | 21·4 |
| 1959-60 | | 69,444 | 21·2 |
| 1960-61 | | 68,955 | 21·1 |
| 1961-62 | | 75,038 | 23·0 |
| 1962-63 | | 74,425 | 22·8 |
| 1963-64 | | 74,730 | 22·9 |
| 1964-65 | | 75,332* | 23·1 |
| 1965-66 | | 75,541 | 23·1 |
| 1966-67 | | 75,351 | 23·1 |

**3.4. The Committee regret to note that since the adoption of the National Forest Policy Resolution in 1952, the total addition to forest area in the country till 1966-67 i.e. over a period of 15 years, has been of about 2 million hectares, registering in increase of only 6% in the forest area. The proportion of the forest area to the total land area in the country still lags far behind the target of 33.1/3% set in the National Forest Policy Resolution. Thus the progress in increasing the forest area in the country is far from satisfactory. The Committee urge that effective steps should be taken by the Central Board of Forestry which is composed of representatives of the States/Union Territories to increase the forest area in the various States where possibilities therefor exist.**

*Proportion of forest area in States/Union Territories*

3.5. In the National Forest Policy Resolution, it has been stated that "as an insurance against denudation a much larger percentage of the land, about 60 per cent, should be kept under forests for their protective functions in the Himalayas, the Deccan and other mountainous tracts liable to erosion. In the plains, where the ground is flat and erosion is normally not a serious factor, the proportion to be attained should be placed at 20 percent; and in view of the pressure of agriculture, efforts at the extension of tree lands should be concentrated on river banks and other convenient places not suitable for agriculture". It has been emphasized that even distribution of forests in all physical regions is as important as its over-all proportion.

*Revised figure.

3.6. The area under forests in each State/Union Territory and its percentage to tal land area is given in the following table:—

(Thousand hectares)*

| State/Union Territory | Land area as on 1-1-66 | Forest area (1966-67) | %of forest are to All India | %of Forest area to land area |
|---|---|---|---|---|
| Andhra Pradesh | 27,524 | 6,651 | 8·83 | 24·2 |
| Assam | 12,197 | 4,565 | 6·06 | 37·4 |
| Bihar | 17,401 | 3,085 | 4·09 | 17·7 |
| Gujarat | 18,709 | 1,940 | 2·57 | 10·4 |
| Haryana | 4,380 | 136 | 0·18 | 3·1 |
| Jammu & Kashmir | 22,287 | 2,081 | 2·76 | 9·3 |
| Kerala | 3,887 | 1,041 | 1.38 | 26·8 |
| Madhya Pradesh | 44,346 | 17,299 | 22·96 | 39·0 |
| Madras | 12,997 | 2,218 | 2·94 | 17·1 |
| Maharashtra | 30,727 | 6,686 | 8·87 | 21·8 |
| Mysore | 19,176 | 3,520 | 4·67 | 18·4 |
| Nagaland | 1,649 | 310 | 0·41 | 18·8 |
| Orissa | 15,586 | 6,816 | 9·05 | 43·7 |
| Punjab | 5,030 | 188 | 0·25 | 3·7 |
| Rajasthan | 34,227 | 3,764 | 5·00 | 11·0 |
| Uttar Pradesh | 29,436 | 4,571 | 6·07 | 15·5 |
| West Bengal | 8,767 | 1,183 | 1·57 | 13·5 |
| Total—States | 3,08,326 | 66,054 | 87·66 | 21·4 |
| A. & N. Islands *c* | 829 | 635 | 0·84 | 76·6 |
| Delhi | 148 | 5 | 0·01 | 3·4 |
| Goa, Daman & Diu | 373 | 103 | 0·14 | 27·6 |
| Himachal Pradesh | 5,600 | 2,165 | 2·87 | 38·7 |
| Manipur | 2,235 | 602 | 0·80 | 26·9 |
| N.E.F. Agency | 8,143 | 5,154 | 6·84 | 63·3 |
| Tripura | 1,045 | 633 | 0·84 | 60·6 |
| All-India | 3,26,809** | 75,351 | 100·00 | 23·1 |

*One hectare is equivalent to 2·471 acres.

** Includes land area for the Union Territories of Chandigarh, Pondicherry, Karikal, Laccadive Minicoy & Amindivi Islands, Dadra & Nagar Haveli.

3.7. The Committee have been informed that the low percentage of forest area in the States of Haryana, Punjab and Gujarat is due to their reorganisation. Regarding Rajasthan the percentage is low due to extreme arid conditions and even 11 per cent which has been mentioned as covering under forests in that State is doubtful. In Jammu and Kashmir the percentage is low because large area falls outside the tree level as in Ladakh and Leh.

3.8. Asked what special efforts were made to raise the forest area in the aforementioned States, the representative of the Ministry informed the Committee that the State Governments had been requested to increase the area under forests as much as possible.

3.9. In order to overcome the problem of uneven distribution of forests in different regions, it was suggested in the First Five Year Plan that for each State, the proportion of the area that ought to be under forests should be clearly indicated by the Central Board of Forestry, keeping in view the principle of proper land-use, the nature of terrain and the national needs. After ascertaining this figure steps should be taken to extend the forest area specially to waste lands and lands considered unsuitable for cultivation., Deforestation may be allowed for the extension of permanent agriculture only where the area under forest is above this proportion or where some equivalent area can be afforested.

3.10. Asked during evidence whether any such proportion for each State, as mentioned above, had been fixed by the Central Board of Forestry, the representative of the Ministry stated that since the National Forest Policy Resolution had already prescribed the percentage of forest area to total land area to 60 in mountainous tracks and 20 in the plain regions, no separate proportion was fixed State-wise. The representative of the Ministry, however, added that the Central Board of Forestry had recommended from time to time that as much area as possible should be brought under forests.

3.11. The Foodgrains Enquiry Committee in their report submitted in 1957 had also made the following observations in this regard:-

> "9.34 Forests—Intimately connected with the production of food is the question of forests. In India, forests account for 22 per cent of the total surface, but a large part of this forest is forest only in name, and it is very unevenly distributed. The enormous disparity in the forest area in different parts of the country will appear from Table 9 in Appendix VI.* The National Forest Policy Resolution of 1952 proposed that the area under forests should be raised steadily to 33 per cent of

*Not reproduced.

the total area, the proportion to be aimed at being 60 per cent in the hilly region and 20 per cent in the plains. Very little has been done to implement this resolution. The low percentage of forests in the plains has many harmful effects on agricultural production as has been repeatedly stressed. We recommend that the National Forest Policy Resolution should be implemented as soon as possible, particularly as regards its provision that the wooded area in the plains should be raised to 20 per cent.

9.35. **Competition between Forestry and Agriculture**—It should be recognised that there may in some places be a certain degree of conflict between increasing forest area and what is called 'reclaiming waste land'. Such waste land is often area officially classified as forest in other words—area that was formerly wooded but has now been depleted of trees. Such waste land must be reforested, and not be permitted to be brought under the plough as it is very often of poor quality for agricultural purposes. The overall conflict between the claims of forests and any attempt to increase the cultivated area appears from the following figures:

Land utilisation of India—

(Million acres)

| | |
|---|---|
| Geographical area | 811 |
| Classified area | 722 |
| Forest | 133 |
| Not-available for cultivation | 122 |
| Uncultivated land | 95 |
| Cultivated land including fallows | 372 |
| | 722 |

If the forests are to be increased to 33 percent of the classified area, the forest area must be increased from 133 million acres to 241 million acres, an increase of 108 million acres. But the uncultivated land is only 95 million acres, and, besides, there is the claim to bring more land under the plough. This argument must, however, be taken together with the detailed figures given in Appendix giving the distribution of the forest land in different parts of the country. While in certain States there

may be scope for reclaiming land from the forest, in other areas, it will be necessary to increase the wooded areas. In fact, there is reason to think that some of the land now classified and used as agricultural land could be more profitably turned into forest. This is where the land is of poorer quality, which hardly repays the cost of cultivation but which would become an economic asset if turned into a wooded area. A careful examination of land utilization from this point of view is, therefore, an urgent necessity."

**3.12. From the statistics of the area under forests in the various States/ Union Territories, it is evident that the forest area is below 4% of the total land area in Haryana and Punjab and below 10% in Delhi and Jammu & Kashmir. The position in Gujarat, Rajasthan and West Bengal is also far from satisfactory. The Committee realise that there may not be equal scope for extension of the forest areas in all regions and States. It is, therefore, very essential that the proportion of the area that ought to be under forests in each State/Union Territory should be clearly indicated. It is regrettable that this has not been done so far although in the First Five Year Plan the Central Board of Forestry was made specifically responsible for this work. The Committee strongly recommend that Central Board of Forestry should take urgent measures in this behalf and try to complete the work by a specified time. The Committee have no doubt that this will greatly help in extending the forest area in the various States/Union Territories.**

## B. Land Use Survey

3.13. It has been pointed out in the National Forest Resolution that the correct solution of the land problem is to evolve a system of balanced and complementary land use, under which each type of land is allotted to that form of use under which it would produce most and deteriorate least. With that end in view, a detailed survey of lands with a view to their proper utilisation was recommended. Asked whether such a survey has been undertaken so far, the Ministry have stated as under:—

"The balanced and complementary land use necessitates about one third of the total land area under forest. As against the above, we have only about 23%. It is, therefore, necessary to augment the forest area in order to achieve a complementary and balanced land use.

Land use planning is done by the State Governments. The State Governments are advised to follow principles of proper utilisation of land according to its capability by carrying out soil

survey before distribution of waste lands. The progress of achieving a balanced and complementary land use according to its use capability depends largely on the progress of land reforms.

In order to carry out detailed surveys for land use capability, training course for six months is run by the All India Soil and Land Use Survey for training field staff of the States."

3.14. The need for augmenting the forest area was recognised in all the three Five Year Plans. In the First Five Year it has been stated that the extension of area under regular forests would necessarily constitute a long term plan. In that connection, it was suggested that an immediate reconnaissance survey should be made of waste land and the area under forests should be extended over waste lands considered suitable for the purpose. The Committee, however were informed during evidence that neither any long term plan was drawn up nor a reconnaissance survey of waste lands as suggested in the First Plan was undertaken by the Central Forestry Wing. The representative of the Ministry also informed the Committee that surveys were carried out by some other agencies including certain States and also by a Committee of the Planning Commission but he could not say that they were very accurate.

3.15. The Committee have further been informed that since the formulation of the National Policy, no specific scheme for increasing the forest area was included in the Five Year Plans. Similarly, no separate provision was earmarked for the purpose out of the total sum of about Rs. 100 crores spent during the period 1951-52 to 1967-68 on various forest development programmes.

3.16. Recently, the Committee set up by the Planning Commission (Stevension Committee) to study the scope and possibilities of intensifying Compost Programme in the country, while suggesting various measures for the conservation of cow dung for manure purposes through the supply of fuelwood, has also *inter alia* recommended that 'a systematic survey of waste lands should be undertaken in all States to identify the areas which can be planted up with fuelwood species at a reasonable cost'.

3.17. The utility of a multi-pronged country-wide land survey in India was also emphasized at the meeting of the Commission on Applied Geography in Developing Countries held recently in New Delhi under the auspices of the International Geographical Congress.

**3.18. The Committee deplore that, while the desirability of a detailed survey of all lands as a basis for evolving a system of balanced and complementary land use was stressed in the National Forest Policy Resolution, such a survey has not been undertaken so far and thus a very important plank of the Policy has been left unattended to. They also regret the failure of the Government either to draw up a long term plan or to undertake a reconnaissance survey of waste lands with the specific object of extending the forest area, as suggested in the First Five Year Plan. The Committee consider that this work cannot entirely be left to the States. They strongly recommend that the Government should accord priority to this question and formulate a systematic programme to carry out a multipronged country-wide land survey, in consultation with and the cooperation of the State Governments which should be assisted to implement the programme. This would not only help in the reclamation of waste lands but would also ensure rational land use and integrated approach to planning.**

## C. Vana Mahotsava

3.19. The Tree Planting Festival or *Vana Mahotsava* was first inaugurated in June, 1950 as a national festival to be observed annually as a step towards making the people forest-conscious and thus enlisting their willing cooperation in the protection of trees. The festival is celebrated every year throughout the country for a week beginning from the 1st of July which generally synchronizes with the break of monsoon in the country. So far nineteen *Vana Mahotsavas* have been celebrated.

3.20. With a view to inculcating a spirit of competition and stimulating public enthusiasm in favour of *Vana Mahotsava,* the following All-India silver shields are awarded every year for the best effort during *Vana Mahotsava* celebrations:—

### *All-India Shields*

| | |
|---|---|
| 1. For best district in India .. | Rajendra Shield. |
| 2. For best village in India .. | Jawahar Shield. |
| 3. For best institution in India | Patel Shield. |
| 4. For best university (with its affiliated colleges in India). | Munshi Shield. |

Twenty State shields are also awarded for the best district in the States or certain groups of States.

3.21. The number of trees planted in the *Vana Mahotsava* weeks held during the years 1950 to 1963 and those survived is as given below. Statistics relating to the subsequent years are not available with the Ministry.

| Year | Number of trees (in millions) | |
|---|---|---|
| | Planted | Survived |
| 1950 | 44·3 | 17·1 |
| 1951 | 34·5 | 17·5 |
| 1952 | 40·2 | 22·2 |
| 1953 | 23·9 | 9·6 |
| 1954 | 31·7 | 15·7 |
| 1955 | 39·7 | 21·1 |
| 1956 | 36·7 | 19·5 |
| 1957 | 44·1 | 21·9 |
| 1958 | 37·3 | 19·8 |
| 1959 | 47·1 | 28·9 |
| 1960 | 40·7 | 25·1 |
| 1961 | 35·6 | 20·7 |
| 1962 | 42·8 | 26·2 |
| 1963 | 58·7 | 37·9 |

3.22. Asked during evidence whether the figures of plantation and survival of trees during the *Vana Mahotsava* programme, as given in the foregoing paragraph, were physically correct, the representative of the Ministry stated that the information had been received from the State Revenue Departments which collected them from their *patwaries* and *talatis*. Asked further whether any sample survey or an assessment of progress of the *Vana Mahotsava* programme by an evaluation team had been made, the representative of the Ministry stated that it was not possible because of the large area involved. He added that the programme was

purely meant to create love and affection for the trees and an awakening among the people.

3.23. In the National Forest Policy Resolution, it has been stated:—

"Although 'tree lands' are not part of regular forests, in a country like India where their increase, management and development are vital needs of the people, they cannot well be left out of any well-considered policy. The Land Transformation Programme of the Government of India envisages the planting of 30 crores of trees in ten years; but this number is very far from about 2,000 crores of trees, which would be necessary to restore the hydrological nutritional balance of the country. The creation of forests by State Forest Departments on such an elaborate scale in ruled out at present by lock of funds and trained personnel. The only way in which some progress can be achieved is by making the whole nation 'tree conscious'. Such consciousness will stimulate private efforts at tree planting. . . .".

3.24. In written reply to a question as well as during the evidence, the Committee have been informed that no separate programme of planting treets under the Land Transformation Programme other than the annual *Vana Mahotsava,* Programme has been undertaken.

**3.25. The Committee are unable to appreciate the reasons for not undertaking any specific programme of tree plantation under the Land Transformation Programme other than the annual Vana Mahotsava the progress of which is primarily based on voluntary efforts. The Committee recommend that a well-coordinated scheme, which may inter alia include tree plantation under annual Vana Mahotsava, for increasing the treelands in the country as envisaged in the National Forest Policy Resolution, may be formulated by the Central Board of Forestry and commended to the State Governments for implementation.**

**3.26. The Committee note that on an average about 54% of the trees planted under Vana Mahotsava, have survived. In the absence of any physical verification or testcheck, they are doubtful if so high a percentage of survival is correct. It is common knowledge that the trees planted ceremonially with all the official pomp and show during Vana Mahotsava week are not later on properly protected and cared for and a large number of them wither away. The Committee need hardly over-emphasize the importance of proper and adequate after-care in the case of tree planting. The Committee suggest that the Central Board of Forestry may devise suitable steps to ensure that the trees planted during Vana Mohot-**

sava are properly looked after and the statistics of survivals are maintained as accurately as possible.

3.27. The Vana Mahotsava was supposed to play a vital role in creating mass consciousness as to the importance of the forests in the national reconstruction and development both from the point of view of their protectived as well as productive functions and with that end in view was intended essentially to be a people's movement. The National Forest Policy also stipulated that encouragement should be afforded to Vana Premi Sangh. The Ministry, however, have no information about the existence of these Vana Premi Sanghas. The Committee are distressed to observe that the public enthusiasm exhibited all over the country in the initial stages of Vana Mahotsava, is fading away and people's participation in it, which is the index of the extent to which the programme has fulfilled its objective, is becoming negligible. The Committee share the widely-prevalent feeling that the whole programme has now been reduced to merely a symbolic action. The Committee urge that the Central Board of Forestry should consider the matter in all its aspects to find out ways and means to revitalize the whole programme so as to stimulate public initiative and participation in this programme. The feasibility of enlisting the support of local bodies. educational institutions and other voluntary organisations in this programme also needs examination.

## D. Functional Classification

3.28. The National Forest Policy Resolution envisaged the following functional classification of forests on the basis of six paramount needs of the country as mentioned earlier, with a view to to ensure ideal management of forests from the point of view of their protective utility and maximum outturn:—

A. *Protection forests* i.e. those forests which must be preserved or created for physical and climatic considerations;

B. *National Forests* i.e. those which have to be maintained and managed to meet the needs of defence, communications, industry and other general purposes of public importance;

C. *Village forests* i.e. those which have to be maintained to provide firewood to release cowdung for manure, and to yield small timber for agricultural implements and other forest produce for local requirements, and to provide grazing for cattle;

D. *Tree lands* i.e. those areas which though outside the scope of the ordinary forest management are essential for the amelioration of the physical conditions of the country.

3.29. It has been stated in the Resolution that the above classification is merely illustrative and is by no means mutually exclusive. In fact every forest performs more than one function, and has therefore, to be so managed as to achieve the highest efficiency in respect of the chief functions assigned to it. This functional classification has also no bearing on the classification of forests distinguished in the Indian Forest Act XVI of 1927, which is based on the degree of control exercisable in them.

3.30. During evidence the Committee were informed that the functional classification as contemplated in the National Policy has been spelt out in the State Working Plans. Asked what were then the difficulties in furnishing the statistics relating to that classification, the representative of the Ministry stated that the information was not available with the Ministry but it could be collected from the States and supplied to the Committee. However, subsequently in a written note the Ministry have informed that no demarcation of forests on functional basis has been made and as such no statistics accordingly are available.

**3.31. The Committee are surprised that no demarcation of forests on functional classification as laid down in the National Forest Policy Resolution of 1952, has yet been made. The Committee cannot over-emphasise the importance of functional classification of forests which is necessary to focus attention on the kind and object of management necessary in each case. They therefore suggest that necessary steps should be taken to demarcate forests on functional basis and to collect statistics in regard thereto as maximum benefits can be derived only after the forests have been classified functionally and are managed to fulfil those specific functions.**

## E. Deforestation

3.32. The area under forests in the country dwindled to a great extent during the two world wars. The pressure on forest land increased further during the post-independence period with the rapidly growing population, problem of settlement of displaced persons and various development schemes.

3.33. Apprehending the far-reaching consequences of the above trend, the National Forest Policy declared that, "the role of forests in the national economy both protective and productive, entitled forests to lay claim to an adequate share of land." The required minimum land area which, according to the Forest Policy should be under forests, was laid down as one-third or thirty-three per cent of the total land area

of the country. It was also pointed out that, 'the indiscriminate extension of agriculture and consequent destruction of forests have not only deprived the local population of fuel and timber, but have also stripped the land of its natural defences against dust-storms, hot desiccating winds, and erosion.... In the abstract, the claims of agriculture undoubtedly appear stronger than those of forestry. The notion widely entertained that forestry, as such, has no intrinsic right to land but may be permitted on sufferance on residual land not required for any other purpose, has to be combated.' Although the First Five Year Plan conceded the need for deforestation but it prescribed that 'deforestation may be allowed for the extension of permanent agriculture only where the area under forests is above this proportion or where some equivalent area can be afforested.'

3.34. In a written reply to a question as to whether any assessment has been made as to the total forest area lost after independence for hydro-electric and irrigation projects, raising agricultural crops, establishment of industrial factories and towns and various other purposes, the Ministry have stated as under:—

> "Information in regard to the extent of forest land lost as a result of various hydro-electric and irrigation projects, raising agricultural crops and establishment of industrial factories and towns since 1947 is not available. However, from the figures compiled for the years 1960-65, it has been estimated that 3,80,070 hectares of forest land has been lost as a result of River Valley and other Projects, Irrigation Schemes, Hydro-electric projects, Industries, Agricultural crops, rehabilitation etc. in 11 States and 4 Union Territories."

3.35. During evidence, the Committee were informed that statistics as to the forest area lost on account of hydro-electric and irrigation projects, raising of agricultural and commercial crops etc. during the earlier period *i.e.* 1952-60 were not available with the Ministry. The Committee were further informed that the question of deforestation attracted the notice of the Government of India in 1965. The relevant statistics for the period 1960-65 were collected as it was easier to get it than to get for 1951 onwards. Previously no data was maintained in that regard.

3.36. After the conclusion of evidence the Ministry have, however, forwarded the following statement indicating the details of forest area

lost for various purposes during the years from 1951 to 1966 as given by States/Union Territories.

(In Hectares)

| Reporting States/Union Territories | Submerged due to execution of River Valley Projects | For Agricultural purposes | For Construction of transmission lines, roads etc. | Estt. of industries & townships | Total |
|---|---|---|---|---|---|
| Andhra Pradesh . | 25,484 | 59,825 | Nil | 5,395 | 90,704 |
| Bihar . | Nil | 45,494 | 879 | 10,294 | 56,667 |
| Gujarat . . | 22,609 | 11,143 | 98 | 36 | 33,886 |
| Jammu & Kashmir | Nil | 550 | Nil | Nil | 550 |
| Kerala . | 2,700 | 80,155 | Nil | 12,084 | 94,939 |
| Madras . . . . | 44,920 | 2,194 | Nil | 299 | 47,413 |
| Madhya Pradesh . | 63,388 | 92,249 | Nil | 24,471 | 180,108 |
| Maharashtra | 2,728 | 44,526 | 32,813 | 7,355 | 87,422 |
| Punjab . . | Nil | 35 | Nil | 18 | 53 |
| Rajasthan . | 14,506 | 31,296 | 308 | 1,275 | 47,385 |
| Uttar Pradesh . . | 44,770 | 39,221 | 2,668 | 18,831 | 105,490 |
| West Bengal | 1,295 | 312,400 | 1,800 | 2,880 | 318,375 |
| A. & N. Islands . | Nil | 6,700 | 500 | 20 | 7,220 |
| TOTAL . . | 222,400 | 725,788 | 39,066 | 82,958 | 1070,212 |

The information pertaining to 1966-67 onwards is not available.

3.37. In a written note furnished to the Committee, it has been stated that at the meeting of the Central Board of Forestry held at Trivandrum in December, 1963 the question of prohibiting further encroachments on forest lands for other purposes was discussed. The Board noted the various competing demands but expressed concern at the inroads made into the forest lands. The Standing Committee of the Central Board of Forestry at its meeting held at Poona in 1964 considered the replies received from the States and urged again that the State Governments should resist attempts on encroachments on forest lands and recommended that there should be some provision for the

replacement of forest areas lost due to submergence in the River Valley Projects. At the Central Board of Forestry meeting held at Simla in 1966 the Forest Ministers of the States were requested to take up this question with their Cabinets keeping in view their peculiar problems. The position was reviewed by the Standing Committee of the Central Board of Forestry at its Bhopal meeting held in September, 1967. It was indicated that in Punjab about 90,000 acres of land which was not suitable for cultivation had been released to the State Forest Department for economic plantations. It was also pointed out that industrial projects and irrigation projects were taking up large forest areas but lack of funds precluded afforestation of waste lands. The necessity for maintaining adequate forest areas was reiterated.

3.38. Asked during evidence whether the State Governments had been taking permission of the Centre or even informing it regarding the loss of forest area for cultivation and other purposes, the representative of the Ministry stated that the Centre was neither informed nor its permission sought. The Central Board of Forestry had, however, been discussing this problem and recommending to the State Governments to resist attempts of encroachments on the forest lands. Explaining the procedure followed by them in that regard, the representative of the Ministry stated that they would write to the States and explain to them that it was not correct. In reply, the Ministry got some or the other plausible excuses and there the matter ended.

3.39. Replying to a question, the representative of the Ministry stated that there was no direction of the Central Government in that regard and only the recommendations of the Central Board of Forestry were sent to the State Governments from time to time.

3.40. To a suggestion that the Centre could put a condition on the loans and grants given to States that the assistance could be withheld or reduced in case they did not fall in line with the policy laid down by the Centre, the representative of the Ministry stated that no such stipulation was made as the question of financial assistance was much a bigger issue dealt with by the Planning Commission and the Finance Ministry. The representative of the Ministry, however, conceded that in order to prevent further deforestation some other effective measures such as dialogue at the Chief Ministers' level at the National Development Council meet etc. could have been taken. In reply to another question as to what attempts were being made by the State to make up the lost forest area, the representative of the Ministry stated that the States did not keep them informed in that regard.

**3.41. The Committee regret to note that an area of about 11 lakh hectares under forests has been lost since 1951 for cultivation and other**

developmental projects etc. in the country. No attempts have simultaneously been made to bring an equivalent area under forest as stipulated in the First Plan and recommended from time to time by the Central Board of Forestry. It appears that the data furnished to the Committee is also incomplete. The Committee feel very much concerned over these continuous inroads into the forest area which is already below the required proportion laid down in the National Forest Policy. In their opinion, if the trend is allowed to continue unchecked, the situation may assume alarming proportions particularly in States having a small forest area. The Committee therefore strongly recommend that Government should immediately pay serious attention to this problem to afforest suitable areas equal to those which have to be deforested on and take effective measures to ensure that simultaneous steps are taken account of the implementation of plan projects etc. The Committee suggest that besides exploring other avenues, this matter may be considered by the National Development Council which is an appropriate forum for taking decisions on such important matters.

## F. Desert Development

3.42. In common palance there is only one desert area in the country *i.e.* the Rajputana desert of India. In recent years the terminology has changed and the world's deserts have been classified on the basis of aridity index. The three arid regions of India are as follows—

*Northern arid zone*: Ladakh-Gilgit tract—1,28,750 sq. km.

*North-western arid zone*: South Eastern Punjab (Ferozepur, Sangrur, Rohtak, Hissar, Mohindragarh and Gurgaon districts); Western Rajasthan (Sriganganagar, Bikaner, Jaisalmer, Barmer, Jalore, Pali, Jodhpur, Nagaur, Sikar, Jhunjhunu and Churu districts): Western Gujarat (Kutch and Jamnagar)—2,95,000 sq. km.

*Southern arid zone*: Rayalseema tract (Bellary, Cuddapah, Anantpur and Chitaldurg)—53,895 sq. km.

3.43. The National Forest Policy Resolution 1952 laid particular stress on the immobilisation of the desert of Rajputana. In this connection, it has been stated that "Attention also needs to be drawn here to the Rajputana desert, more particularly to the fixation of the shifting sand dunes. Strong winds that develop in this region during the summer, transport vast quantities of sand and salt from the sea and Rann of Cutch, whipping the desert into terrific dust storms, the fury of which is felt throughout the North-western India. The desert has spread

through the ages causing the 'westering' of the Indus and the 'northering' of the Sutlej, meeting an obstruction of sorts only along its eastern confines in the Aravalis. The immobilisation of the desert and protection of the remaining fertile belts inside it, constitutes one of the planks of the National Forest Policy."

3.44. In 1952, the National Institute of Science had held a Symposium on "Rajputana Desert". It was recognised in the Symposium that the natural resources of the north-western arid zone had been over-exploited for centuries, and that the rate of over-exploitation was now faster than that in the past.

3.45. The *ad hoc* Committee appointed by the Government of India in 1951, with the Inspector General of Forests as Convenor, to suggest measures for the immobilization of the Rajputana Desert made the following recommendations:—

(1) A Desert Afforestation Research Station be set up at Jodhpur—(i) to study and carry out research about the silviculture of various species growing already in the desert, the possibilities of introducing exotic desert species from other countries, the edaphic factors, hydrological conditions, rainfall, wind velocities at selected points and the nature of aeolian deposits, (ii) to maintain a large seed store for free distribution, (iii) to arrange for demonstration of desert control methods, and (iv) adopt measures for controlling the march of desert by planting shelter belts and wind breaks and stabilising shifting sand dunes by afforestation etc.

(2) Attention of Rajasthan Government should be invited to the pressing need for (i) increasing the proportion of area under forest in Rajasthan in general and in desert zone in particular, (ii) adoption of improved agricultural practices, (iii) creation of subsidiary forest belts, (iv) establishment of seed stores.

3.46 In pursuance of the aforementioned recommendation, a Desert Afforestation Research Station was established in 1952. Later, it was recognised that afforestation techniques were not adequate to control wind erosion and deterioration of natural resources and accordingly the Station was converted into the Desert Afforestation and Soil Conservation Research Station to undertake work on problems of wind erosion, improvement of deteriorated grasslands and evolution of techniques for soil and water conservation in the cultivated areas.

3.47. In the meantime the UNESCO set up a major Arid Zone Project to initiate and intensify research in problems of arid zones in different parts of the world. Under this project, a UNESCO Advisor was invited to advise on the ways and means of tackling problems of desert areas in the country. Besides the problems of wind erosion, there existed the serious problem of deterioration of other natural resources due to constant over-exploitation. A broad-based programme of research was suggested by UNESCO Adviser for the survey of basic resources, study of fundamental problems of soil-water-plant atmosphere relationships, control of pests, regulated grazing of pastures, development of animal husbandry and agriculture on commercial lines and tackling of socio-economic problems . In consequence, the Desert Afforestation and Soil Conservation Research Station was reorganised in 1959 into the Central Arid Zone Reserch Institute, Jodhpur.

3.48. On the basis of the researches conducted at the Central Arid Zone Research Institute it was felt in 1963 that a stage had reached when the results obtained from these researches could be field-tested for extensive application in desert areas. A proposal, therefore, was mooted in 1963 for setting up a Desert Development Authority to organise the desert development work. It was then decided to constitute a working group under the Chairmanship of Shri M. K. Kidwai, the then Joint Secretary in the Ministry of Irrigation and Power, to consider the proposal in all aspects. The Committee had on it the representatives of the Ministry of Food and Agriculture and the Central Water and Power Commission. The Committee submitted its report in February, 1964.

3.49. The Kidwai Committee recommended that action should be taken to prepare a number of pilot projects for development of selected desert areas in Punjab, Rajasthan and Gujarat with a view to application under field conditions of the results of research carried out at the Central Arid Zone Research Institute and the State Government auspices, and that Ministry of Food and Agriculture should appoint one or more officers for the purpose as considered necessary. It was felt that unless some pilot projects were executed, it would be risky to embark on an ambitious programme of desert development. The Committee was also of the view that it may be necessary to ultimately set up a Desert Development Board or some other organisation to watch and coordinate the execution of the projects necessary for the development of desert areas in the States.

3.50. At an inter-Ministerial meeting held in the Planning Commission on May 27, 1965, it was decided that a Desert Development Board should be set up with headquarters at Jodhpur. The Desert Development Board was accordingly set up in June, 1966. (Government Resolution at Appendix IV).

3.51. The Desert Development Board consists of the Union Agriculture Secretary as Chairman and one representative each from the States of Rajasthan, Haryana, and Gujarat, from the Union Ministries/Departments of Health, Education, Irrigation and Power, Finance, Communications, Social Welfare and the Planning Commission, Director, Central Arid Zone Research Institute, Jodhpur, four non-officials, as members, The Board is to meet at least once in six months and its functions are:—

(i) to keep under constant review the preparation of schemes for the development of the desert areas;

(ii) to arrange for the execution of these schemes through the agencies of the State Governments;

(iii) to remove administrative bottlenecks hindering the progress of the schemes;

(iv) to arrange for training of personnel required for these schemes; and in general;

(v) to ensure that the desert areas of the country receive the attention they deserve.

The Board started functioning in November, 1967 when the Director was appointed. It has decided that to begin with 7 Community Development Blocks should be taken up for pilot projects, 3 in the first year and 4 in the second year and that review of the working of these projects should be carried out before embarking on the development of any more areas. It has also decided that each block should be coterminus with the existing community development blocks to enable the full utilisation of the existing facilities in these blocks by way of staff and other resources.

3.52. As regards the pattern of financial assistance, it was decided that 100 per cent assistance should be provided for staff only and 75 per cent assistance by way of grant and 25 per cent by way of loan for the remaining expenditure.

3.53. The first meeting of the Desert Development Board was held on 25-1-1968. The Board considered the broad outlines of the approach to tackle the problems of the desert areas. The Board felt that it should not restrict itself to programmes designed to suit existing Community Development Blocks, and recommended that schemes should be taken up in various parts of the desert areas in Rajasthan, Gujarat and Haryana for investigation of groundwater resources, development of sheep and wool, supply of drinking water for men and cattle, soil and water conservation works and the development of pastures and fodder resources. At its second meeting held on 15-5-1968, the Board also considered the programme for

the Fourth Five Year Plan period and suggested an outlay of Rs. 10 crores for schemes relating to pasture development, soil conservation, afforestation, agriculture development, etc. in the desert areas of Haryana, Gujarat and Rajasthan. The outlay under this head for the Fourth Five Year Plan period has, however, not so far been finalised. However, the Committee of National Development Council have decided that expenditure on projects to be implemented through the Desert Development Board should be treated as Central Sector expenditure and should be included in the Central Plan outlay.

3.54. The Committee have been informed that in Rajasthan, the progress regarding afforestation and soil conservation measures in desert areas has been as under:—

(a) *Afforestation & pasture development*

An area of 850 ha. in the Second Plan, 6693 ha. in the Third Plan, and 800 ha. during the years 1966-67 and 1967-68 was covered.

(b) *Sand dune fixation work*

During Third Plan, an area of 371 ha. and during 1966—68, 406 ha. was tackled.

(c) *Shelter belt plantations along roads.*

Shelter belt were created along a length of 114 Km. (road sides) during Third Plan and of the length of 27 Km. during 1966—68.

3.55. During evidence, the representative of the Ministry has stated that for desert development there would have to be integrated pilot plans and the problem has to be tackled on a block approach and not by resorting to afforestation or pasture development only. Under these integrated pilot plans, the work comprised of provision for drinking water, irrigation facilities, more pasture, fodder reserves and afforestation. All these items of work are in the State Plan. In the Central Sector only certain pilot projects would be taken up in desert areas of the three States to serve as a model for the State Governments to follow.

**3.56. While the Committee recognise that the development or reclamation of arid regions is a long term process involving large scale resources, they are constrained to observe that the progress achieved since 1952 in this regard has not been satisfactory. They hope that with the establishment of the Desert Development Board, the problem would receive adequate attention and concerted and sustained efforts would be made to ensure rapid development of these areas. The Committee would like to stress that execution of the pilot projects should be**

periodically reviewed by the Board to keep a watch on the pace of their progress and to ensure efficiency in their execution.

## G. Working Plans

3.57. Working Plan, as the term implies, is a plan for working a particular forest over a certain period, usually not less than 10 and not more than 20 years, under the pre-determined objects of management. The objects of management may be various, viz. protection of physical features, amelioration of climate, improvement of water supply, satisfying of public needs in respect of essential forest products for domestic, agricultural or industrial uses, maintenance of vegetative growth for aesthetic reasons for recreation, to provide a sanctuary for Wild Life etc. It may happen that many different objects are judiciously combined. The working plans are revised periodically to keep them uptodate. Such revision does not necessarily follow changes in Forest Policy but may be necessary to meet the changed conditions of the forest or the demand.

3.58. That working plans are the *sine qua non* of sound forest management was realised in India quite early. The true beginning, in British India, of the proper forest management under a forest working plan is traced as having been made as back as 1856 when the German trained forester, Dr. Brandis, on his appointment as Superintendent of Forests in Pegu (Burma) in 1856 propounded for the first time the fundamental principle that in any forest to be worked as many First Class trees (trees over a prescribed diameter) could and should be felled in an year as would be replaced during the year by the growing stock of the Second Class trees. With the appointment of Dr. Brandis as the first Inspector General forests of India and thereafter, concentrated efforts were made at planned management in the then British India. However, the progress of working plans received a set back during the First and Second World Wars. Efforts to cover the lost ground were resumed after the country became free.

*Working Plan principles*

3.59. The National Forest Policy laid down that in the management of all classes of forests, scrupulous regard for sustained yield was essential with a view to conserving forest resources in perpetuity. The Policy stated that the fluctuations in the annual out-turn of forests upset State budgets, industries and other national enterprises and hence all working plans should aim at confining them within the narrowest limits. It further provided that the compilation of all sound working plans required—(a) the calculation of increment so that what was annually put on was annually cut, leaving the original assets intact or improved; (b) the preparation of the maps, and investigation on the propagation and tending of various species, their increment, the optimum conditions of their growth

and the regulation of yield (c) carefully planned afforestation schemes to replace inferior tree growth by valuable species of commercial importance.

*Working Plan Organisation*

3.60. The National Policy also recognised the need of setting up in each State a permanent organisation to deal with working plans; their compilation and revision and deviations from them, research and statistics, as well as to conduct detailed survey of available forest resources.

3.61. The management status of the forest areas in different States/Union Territories in 1964-65 is as shown in the Table:—

*Management Status* (1964-65)

| State/Union Territory | Total forest Area | Forests managed under Working Plants | Forest with controlled exploitation | Other forest |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| Andhra Pradesh | 6,450 | 4,828 | 1,622 | |
| Assam | 4,545 | 1,486 | 150 | 2,909 |
| Bihar | 3,143 | 2,989 | 154 | |
| Gujarat | 1,866 | 1,288 | 319 | 259 |
| Jammu & Kashmir | 2,081 | 1,896 | 141 | 44 |
| Kerala | 1,042 | 694 | 191 | 157 |
| Madhya Pradesh | 17,111 | 4,586 | 12,525 | |
| Madras | 2,222 | 1,993 | 114 | 115 |
| Maharashtra | 6,709 | 4,294 | 1,637 | 778 |
| Mysore | 3,520 | 2,092+ | 979+ | 449+ |
| Nagaland | 312 | 37 | 54 | 221 |
| Orissa | 6,816 | 3,267 | 3,528 | 21 |
| Punjab (Composite) | 1,785 | 631 | 1,154 | |
| Rajasthan | 3,853 | 2,770 | 1,083 | .. |
| Uttar Pradesh | 4,665 | 2,775 | 728 | 1,162 |
| West Bengal | 1,181 | 289 | 869 | 23 |
| State Total | 67,301 | 35,915 | 25,248 | 6,138 |

+Estimated.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Andaman & Nicoar Islands | 582 | .. | 582 | .. |
| Delhi . . . | 5 | .. | 5 | |
| Goa, Daman & Diu . . | 103 | .. | 103 | .. |
| Himachal Pradesh (Erstwhile) . . | 1,245 | 837 | 246 | 162 |
| Manipur . . . | 599 | .. | 599 | .. |
| N.E.F. Agency . . | 4,862 | 424 | 4,438 | .. |
| Tripura . . . | 635 | 336 | 299 | .. |
| All-India . . . . | 75,332 | 37,512 | 31,520 | 6,300 |

Thus, about 49.7 per cent of the total forest area in the country was under the working plans in 1964-65. According to 100 years of Indian Forestry (published by the Forest Research Institute, Dehra Dun), the percentage was 35, 41 and 45 in 1951-52, and 1955-56 and 1957-58, respectively.

*Control of Working Plans*

3.62. While a well-drawn up working plan is essential, it is also equally necessary to ensure that the prescriptions of the sanctioned plan are actually carried out and that deviations, if any from the prescriptions have received the prior approval of the administrative authority concerned, *viz*, the Conservator or the Chief Conservator. For this purpose, the Working Plan or the Departmental Code prescribes maintenance of certain records, known as control forms and control maps, which give, from year to year, the operations carried out against those prescribed in the working plan.

3.63. During evidence, the Committee have been informed that each State has set up a permanent organisation to deal with working plans on the lines indicated in the National Forest Policy and that they are also following the various guidelines mentioned therein.

3.64. In written reply to a question, the Committee have also been informed that "the State Governments have competent technical personnel to discharge effectively their functions relating to compilation and revision of working plans. Research and statistics are looked after by the State silviculturists who are technically qualified officers. Some States have appointed statisticians to handle forestry statistics. During the course of compilation and revision of working plans, the working plan officers carry out growing stock surveys such as enumerations, stockmapping etc. Detailed resources surveys are, however, conducted under the schemes of Forest Resources for which separate officers are appointed."

*Centre's scrutiny*

3.65. The State Working Plans are discussed in the regional meetings of the Central Forestry Commission. The examination by the Commission is confined to the impact of national plans (five year plans) on the existing working plans and to suggest re-orientation and outlook necessary in that light. Whatever alterations etc. are considered necessary are discussed and finalised, in the regional meetings of the Commission. The detailed examination of the actual prescriptions of the individual working plans is left to the concerned authorities in the States.

*All India Working Plan Code*

3.66. At present, despite general similarity, each State has its own procedure of preparing Working Plans, which is embodied in its Working Plan Code. Where the Working Plan Code is still to be compiled, the procedure is indicated in the Department's standing instruction on the subject. In order to bring uniformity in the standards adopted by all the States, the Central Forestry Commission is working on the All India Working Plan Code.

**3.67. The Committee note that approximately half of the forest area in the country has been brought under working plans. Out of the remaining half, about 41.9 percent of the total forest area is under controlled exploitation and 8.4 percent is without any management plan. Now that a permanent organisation equipped with technical personnel to deal with working plans has been set up in each State, the Committee have no doubt that concerted efforts would be made to accelarate the progress in regard to the preparation of working plans for the remaining areas also, so as to ensure scientific management of the forests. They would suggest that the feasibility of laying down annual target for covering the remaining forest area by working plans in each State may be examined and the progress thereof watched.**

**3.68. The Committee are glad to note that the Central Forestry Commission is working on the All India Working Plan Code. They hope that efforts would be made by the Forestry Commission to complete the work at an early date.**

*Forest maps*

3.69. The proposal that every State should have detailed productivity maps of all their compact areas under forests, was mooted at the fifth meeting of the Central Board of Forestry held at Pachmarhi in May, 1959. It was considered that these maps should indicate the areas according to the quality of trees grown and the output obtainable per acre as also the

areas which were understocked. The Board considered the proposal and decided that the work regarding preparation of maps and atlases be taken up as to provide comprehensive information regarding the distribution of forest wealth including forest products, in the various parts of the country both for planning and publicity purposes.

3.70. It has been stated that progress made in the matter was reviewed at the Standing Committee meeting held at Poona in June, 1964, when the Committee noted that work was held up for want of information from States/Union Territories and therefore it urged that the State Governments should furnish requisite material to the Forest Research Institute, Dehra Dun, expeditiously. The matter was further reviewed at the Central Board of Forestry meeting held at Ranchi in January, 1965 and again at Simla in October, 1966 when a limit of two months was fixed for the submission of information by the State Governments. Since some of the States still did not furnish information as late as June, 1968, when the Central Board of Forestry met at Bangalore for its Eleventh meeting, need of expeditious submission of requisite material was emphasized.

3.71. The Committee have been informed that the requisite material is still awaited from Assam, Jammu & Kashmir, Madhya Pradesh, Nagaland and West Bengal and the work is proposed to be finalised on receipt of information from them.

**3.72. The Committee feel concerned over the inordinate delay of nearly a decade in the collection of information regarding preparation of maps and atlases. The importance of forest maps as an essential prerequisite to planning needs hardly any emphasis. The Committee suggest that the question of collection of information in respect of the concerned States may be taken up at the appropriate higher level and efforts made to complete the work at an early date.**

## H. Grazing

3.73. India possesses a livestock population of over 300 million of which 225 million are bovine animals, about one-tenth of which graze in forests. Wherever forests are easily accessible, the live-stock depends entirely on grazing in them as stall-feeding is far more expensive. Heavily grazed forests provide very little inferior fodder, mostly roughage, to the animals which are therefore poorly developed compared to those fed at the stake.

3.74. The principles on which grazing is admitted in forests are of fundamental importance as forests play an important role in the economic life of the people. Production of trees and provision of

grazing and fodder are two conflicting demands on land, which can overlap only to a certain extent. When the limit of safety is exceeded, the physiological balance of the plant community is so upset that both tree growth and pasture rapidly deteriorate.

3.75 The National Forest Policy has recognised that generally all grazing in forests, particularly unlimited or uncontrolled grazing, is incompatible with scientific forestry. It is stated that since grazing does take place in forests; it has to be accepted as a hard fact. For the efficient management, the Policy lays down that grazing should be regulated as regards the time, place and the number of cattle admitted, by following cardinal principles such as, (i) introduction of rotational grazing, (ii) curtailment of free and indiscriminate grazing, (iii) levy of a reasonable fee for the privilege of grazing, (iv) complete prohibition of grazing in regeneration areas and young plantations as to eliminate the danger of seedlings being browsed or trampled upon, and (v) keeping the incidence of grazing at a minimum in protection forests. It further stresses the need to the imposition of restrictions on sheep grazing in forests and the total exclusion of goats therefrom.

3.76. From the information furnished in a written reply to the Committee in regard to certain States and Union Territories, it appears that in most of the States grazing of cattle in the forests presents a great problem. In Bihar, grazing is permitted in all forests except in plantations and newly regenerated areas where the closure is for a period of five years. Old grazing rights are still available to local villagers and to others on payment of annual fees. In Haryana, while domestic cattle grazing is generally permitted, regulations vary from district to district. Grazing in some areas of Reserved Forests is allowed on payment. Similarly in Madhya Pradesh, grazing to all domesticated cattle is allowed in Mahakoshal, Vindhya Pradesh, Madhya Bharat and Bhopal regions. In Madras, grazing is permitted in Reserved Forests and reserved lands on permits issued by the Forest Department subject to these areas being closed to grazing according to the prescription and regulations laid down in the Working Plans. In Marathwada and Western Maharashtra regions of Maharashtra State, grazing is permitted in all the regions except for routine closures. In Vidarbha Region, forests have been divided in Protection Forests, Tree Forests, Minor Forests and Pasture Lands. Grazing is not permitted in Protection Forests but is allowed in other categories of Forests according to cattle priorities and other regulations. In Mysore, free grazing is permitted in all the forests except regeneration areas and certain areas protected for the purpose from time to time. Rules framed under the Mysore Forest Act, 1963 are under scrutiny. In Punjab and Uttar Pradesh, grazing is permitted in forest areas not taken up for regeneration purposes. In Nagaland

no grazing is permitted. As regards Union Territories of Manipur and Andaman and Nicobar Islands, the problem is not much. In Tripura and Delhi, controlled grazing is practised. Information regarding States of Andhra Pradesh, Assam, Gujarat, Kerala, Orissa, Rajasthan and West Bengal, has not been furnished.

3.77. The Committee, however, understand that in Andhra Pradesh, pastures around the twin cities of Hyderabad and Secunderabad and in Nalgonda and Mahboobnagar are auctioned to contractors for cutting and removal of grass. In other places, grazing is allowed on payment of annual fee ranging between 0.25 p. to Rs. 5.15 p. In Assam, the Land Revenue authority is in direct charge of fodder and pasture lands. In the reserved forests, controlled grazing by forest villagers and some professional graziers is allowed in restricted localities. In Gujarat, in areas where requirements of fodder and grazing are heavy, definite suitable areas are set apart for the purpose of grazing and fodder production. Wherever grazing is permitted, it is regulated both in respect of number of animals and in respect of time. In Kerala, grazing is allowed unrestrictedly but under permit system. In Orissa, free grazing is permitted in unmanaged forests. In Rajasthan, grazing is permitted but fee varies from area to area. In West Bengal, forests are closed to grazing.

3.78. During evidence, it has been stated by the representative of the Ministry that some of the States have taken steps to formulate a grazing policy on the lines suggested in the National Forest Policy Resolution. It has also been stated that some of the States like Madhya Pradesh and Maharashtra have their difficulties in following the steps recommended by the Centre. In reply to a question, it has been further stated that none of the States have asked for any help in the matter but all the same difficulties are there due to excessive cattle and relatively less area.

3.79. The question of controlling grazing in forests was discussed at the Seventh and Tenth Meetings of the Central Board of Forestry held at Dehra Dun and Simla in October, 1962 and October, 1966, respectively. The State representatives pointed out various difficulties such as large increase in cattle population, nominal grazing fee, continuance of customary and conventional rights of grazing etc. It was recognised that with the increasing cattle population and difficult position of the fodder resources, the quality of cattle also went down. It was also felt that besides imposing restrictions on grazing, the people should be educated about the economic and scientific aspects of the

problem. Finally, the following resolution was adopted at the Simla meeting:—

> "The Board reiterated the National Forest Policy with regard to forest grazing and recommended that each State Government should (i) take suitable measures to control grazing in forest areas, and (ii) adopt a cattle grazing which should be in the best interest of the nation."

3.80. The very fact that the Central Board of Forestry has had to adopt a resolution on forest grazing in 1966 i.e. after the lapse of a period of fourteen years since the formulation of the National Forest Policy, shows that the guidelines set out therein have not been followed by all the States. In this connection the Committee would like to recall the resolution adopted by the Central Board of Forestry at its meeting held at Madras in May, 1955, endorsing generally the recommendations of the Fourth World Forestry Congress and inter alia recommending that a special study of forest grazing in the country should be carried out by the Centre. The Committee regret to point out that such a study has not been undertaken so far. They strongly recommend that urgent steps be taken to carry out a special study of the whole problem so that a sound grazing policy is evolved and adopted by the Forest Administration in the States suiting to the conditions obtaining in each State.

3.81. The Committee realise that the very large livestock population in the country is the main obstacle in controlling grazing in the forests. Further liberal concessions and cheap forest grazing fees—as low as 0.25 P. per animal per annum—are not only detrimental to forests but are primarily responsible for the present low-utility value of the stock. The Committee, therefore, feel that while the fundamental principles enunciated in the National Forest Policy still hold good, it would be desirable to find out ways and means to regulate the number of livestock and carry out studies to determine (1) the best method of grazing, viz. rotational, intermittent, etc., (2) present and future grazing potentials, and (3) possibilities and implications of increasing the grazing fee and of categorising the livestock for assigning priority for admission to grazing.

3.82. The Committee consider that in implementing a sound grazing policy it is essential to seek the willing cooperation of the villagers. For this purpose suitable measures should be taken to educate the villagers and demonstrate to them the advantages of scientific rotational grazing blocks keeping cattle in areas specially assigned for them and having quality livestock.

## I. Shifting Cultivation

3.83. In order to save forests from the damage and destruction caused to them by the practice of shifting cultivation, the National Forest Policy laid distress on becoming the primitive people or tribals away from their age-old practice by pursuasion and a missionary approach. It was suggested that to achieve the desired results, possibilities of regulating this practice by combining it with forest regeneration (Taungya) to the benefit of both should be explored, enlisting the cooperation of the cultivators by showing consideration to their needs and wishes and thereby gaining their confidence.

3.84. This practice also variously called *Dahya, Jhum, Podu, Kumri, Bewar* etc., has been long prevalent in certain remote forests of India. The technique used in different places, varies in detail, but by and large, it consists of ruthlessly cutting down the tree growth and other vegetation and burning the debris. In course of time due to soil run off the land becomes permanently unproductive. The First and Second Five Year Plans also suggested measures to be adopted with a view to replace this practice with the settled form of agriculture. These included provision of fertile and irrigated land, assistance by way of implements, seeds, etc. and other facilities for education and welfare.

3.85. The Committee have been informed during evidence that the shifting cultivation is still prevalent in the States of Andhra Pradesh, Assam, Orissa, Bihar, Madhya Pradesh, Maharashtra, Mysore, Kerala and Uttar Pradesh and in some of the Union territories. Measures to regulate the practice and combining it with forest regeneration are stated to have been introduced in the States of Assam, Orissa, Andhra Pradesh, Uttar Pradesh and the Union Territories. Wherever the plantations are to be raised and the land is fit for cultivation, the cultivators are allowed to raise cultivation for a period of 3 years or 5 years depending upon the locality and the soil and if the trees grow quicker there, the period is, three years. The system has worked well particularly in Uttar Pradesh.

3.86. The Committee have also been informed that the magnitude of the problem is comparatively more in Assam, Orissa and Madhya Pradesh which have large forest areas and tribals living there.

**3.87. The Committee realise that shifting cultivation is an age-old practice with the tribals and aboriginals which can be replaced only gradually, having due regard to the susceptibilities of the people pursuing it and that any programme in this direction has to form part of wider plan for the tribal welfare. At the same time, they feel that concerted efforts have not been made so far to wean away these people from this**

practice. In the opinion of the Committee, besides introducing agro-silviculture measures with the provision of necessary opportunities and facilities, steps should be taken to provide tribals with alternative means of livelihood. In this connection, the Committee reiterate the observations made in the report of the Dhebar Commission on Scheduled Areas and Scheduled Tribes (1961) that "The Forest Department, as a branch of Government, should consider itself responsible for the development of the tribals as well as the forest areas. It should not think in terms of an exclusive obligation to trees or vegetation but should also accept an obligation to utilize the forests as much as possible from the angle of the economic development of the tribes residing in it. In return the tribals should recognize the need to preserve the forests. An essential feature of this new approach is that the forest department should undertake the responsibility of giving adequate employment to the tribals living in and around the forest areas. Development of forests and the betterment of the tribals should no longer be at loggerheads. They have to go hand in hand".

## J. Forest Legislation

3.88. At the time of formulation of the National Forest Policy, forest legislation existed in the Indian Forest Act, 1927 and the Madras Forest Act, so far as forests under the control of the Central Government and of Part A States were concerned. While in some of the Part B States there were forest regulations having the force of law, in some Part C States forest laws did not exist at all. In view of this position, the National Forest Policy stressed the need for enacting legislation on the lines of the Indian Forest Act or validating that Act by such of the States as had no legislation.

3.89. In pursuance of the above recommendation, some of the States enacted their own full scale Forest Acts in line with the Central Act and some extended the provisions of the Central Act to their territories.

3.90. In October, 1962, the Central Board of Forestry at is meeting held at Dehra Dun discussed the question of making amendments to the Indian Forest Act. It was decided that suggestions for improvements and changes in the Act in the light of recent developments might be invited from the State Governments and then proposals for the amendment of the Act in the desired directions drawn up. The suggestions made by the State Governments and Union Territories were examined by the Standing Committee of the Board at its meeting held at Srinagar in June, 1963. The Standing Committee constituted a sub-Committee with Forest Minister, West Bengal, as Chairman and sixteen other members including some State Forest Ministers, Inspector General

of Forests, Chief Conservators of Forests, etc. as members, to consider in consultation with the Union Ministry of Law the question of amendment of the Indian Forest Act and of a Model Bill for the preservation and protection of forests. The Sub-Committee recommended a number of amendments in the Act suggesting *inter alia* inclusion of certain items within the definition of 'forest produce', deletion of Chapter III on Village Forests, enhancement of penalties for offences committed in Protected Forests, tightening of other provisions relating to the control of timber and other forest produce in transit, etc. The Ministry of Law in their comments on the proposed amendments pointed out as under:—

> "The subject "Forests" in entry 19 in the State List in the Seventh Schedule to the Constitution and therefore under article 246 (3) of the Constitution the State Legislatures have exclusive power to make laws on their subject. The Forest Act, 1927 cannot therefore be amended by Parliamentary Legislation. The fact that the Forest Act is Act of the Governor General-in-Council is irrelevant. After the commencement of the Government of India Act, 1937, the Central Legislature had the power to amend the Indian Forest Act. Under the Constitution this power is vested exclusively in the State Legislatures as already stated. Parliamentary Legislation on this subject is therefore not possible."

3.91. The recommendations of the Sub-Committee together with the comments of the Law Ministry were considered by the Central Board of Forestry at its meeting held at Trivandrum in December, 1963. In view of the constitutional position, the Board decided that the recommendations of the Sub-Committee along with the Law Ministry's comments might be forwarded to the State Governments for initiating necessary action for amending the State forest laws.

3.92. The Committee have been informed that the State Governments of Bihar, Andhra Pradesh, Madras and Gujarat have accepted the suggestions made by the Sub-Committee and have promised to introudce necessary legislation for the purpose. The reaction of other State Governments is not yet known to the Centre. Asked as to whether the Centre has laid down any guidelines for the States to modernise their customary laws, the Committee have been informed that except the above recommendations of the Sub-Committee which were commended to States for implementation, no other guidelines have been prescribed to the States to enable them to modernise customary Laws. Up-to-date information regarding the progress made by the States in this direction is not available.

**3.93. The Committee regret to note that no follow up action has been taken by the State Governments to watch the speedy implementation of**

the recommendations of the Sub-Committee of the Central Board of Forestry made in December, 1963. They hope that the matter would be pursued vigorously by the Central Board of Forestry with the State Governments to persuade them to bring their forest laws in conformity with the afore-mentioned recommendations of the Sub-Committee as early as possible. Further in order to protect the forest wealth from the damage often caused by the exercise of unfettered rights available to the local habitants under customary laws in certain States, the Committee suggest that the feasibility of regulating/restricting these rights by providing suitable assistance to the affected parties so as to avoid hardships to them, may be examined by the Central Board of Forestry in consultation with the representatives of the concerned State Governments.

## K. Private Forests

3.94. The present total area of private forests in each State and Union Territory is stated to be as under:—

| Name of the State/Union Territory | Total area of private forests during 1966-67 (thousand hectares) |
|---|---|
| Gujarat | 203 |
| Haryana | 75 |
| Kerala | 158 |
| Maharashtra | 396 |
| Nagaland | 207 |
| Orissa | 21 |
| Punjab | 113 |
| Uttar Pradesh | 17 |
| West Bengal | 5 |
| Himachal Pradesh | 152 |
| Andhra Pradesh | NIL |
| Assam | NIL |
| Bihar | NIL |
| Jammu & Kashmir | NIL |
| Madhya Pradesh | NIL |
| Madras | NIL |
| Mysore, Rajasthan, A & N Islands, Delhi, Goa, Daman and Diu, Manipur, N.E.F. Agency & Tripura. | NIL |
| Total | 1,347 |

3.95. The need to regulate the control and management of private forests in the larger national interest so that the indiscriminate exercise of individual rights may not prejudice or endanager general welfare, was recognised by the National Forests Policy. Taking note of the pattern of legislation initiated during early post-independence period and also the tendency discernable among owners of private forests to cash in their assets by excessive exploitation of forests, the National Forest Policy laid down that the control and management of private forests should be strictly regulated and where that could not be done, they should be taken over by the State Governments by effective legislation.

3.96. In reply to a question as to what action has been taken by the States in pursuance of the above policy, the Ministry have forwarded the following information furnished to them by various State Governments:—

"*Tripura.*—There is not much of private forest in Tripura.

*West Bengal.*—Private forests are being taken over for management by the Forest Department.

*Punjab.*—There are practicably no private forests in this State.

*NEFA.*—There are two recognised private forests in the State. They are being managed by the Forest Department.

*Mysore.*—Private Forests in Ex-Bombay area are being regulated under the provisions of the Forest Act.

*Haryana.*—Private forests are being managed in accordance with the provisions of the Forest Act.

*Uttar Pradesh.*—Private forests are being managed scientifically. A Private Forest Act is also under consideration of the State Government.

*Andhra Pradesh.*—Private forests are being managed in accordance with Forest Acts and rules made thereunder.

*Himachal Pradesh.*—Private forests are being managed in accordance with the Himachal Pradesh Private Forest Act, 1954.

*Maharashtra.*—Private forests in the State are now being managed on scientific lines.

*Madhya Pradesh.*—Private forests taken over by the State are being managed in accordance with scientific principles.

*Kerala.*—Pending necessary legislation for acquisition of private forests, it has not been possible to acquire the private forests."

3.97. The Committee note that the area of private forests in various State/Union Territories is quite small as a result of the enactment of Zamindari Abolition and other Land Reforms laws by the States. They are glad to note that the States have generally enacted special laws in order to regulate the control and management of the private forests.

### I. Sinking Fund

3.98. It has been emphasized in the National Forest Policy Resolution that Forestry is a long term enterprise and a steady flow of funds is indispensable for sustained forest operations such as, replacement of what is removed annually, improvement of remaining crops, development of communications for opening up remote areas, and undertaking of protective measures which have to be based on phased schemes. The National Forest Policy, therefore, suggested the creation of a sinking fund by investing a portion of the forest revenue in Government securities, more particularly during boom years so as to ensure not only availability of funds for replacement and development costs but also for serving as an equalizing fund to be drawn upon in lean years to prevent a fall in revenue. The Policy further stated that "the immediate profit motive should be rigidly ruled out; for this urge may endanger the supply of large and special timber for defence and industry and lead to a disturbance of climatic conditions seriously affecting agriculture. The adoption of rotations to produce large-sized timber is often of greater importance to the general economy of the country than that of rotations which yield the maximum rate of interest in forest investments".

3.99. Asked whether a sinking fund has been created, the Ministry have stated in written reply that since creation of a sinking fund was contingent upon availability of surplus revenue during boom years, which the country has not enjoyed, no such fund has been created so far.

3.100. From the information furnished to the Committee, it is observed that compared with the forest revenue the percentage of total

expenditure on forests (normal as well as plan development) in various States/Union Territories has been as indicated below:

| | 1951-56 % | 1956-61 % | 1961-66 % | 1966-67 % |
|---|---|---|---|---|
| 1. Andhra Pradesh . | 43 | 36·1 | 38·4 | 48·8 |
| 2. Assam | 66·6 | 62·8 | 44·9 | 40·3 |
| 3. Bihar | 86·9 | 82·8 | 61·9 | 60·8 |
| 4. Gujarat | | | 41·2 | 51·7 |
| 5. Haryana . . | | .. | .. | 217·1 |
| 6. Jammu & Kashmir | 46·9 | 22 | 28·9 | 45·9 |
| 7. Kerala . . | 33·6 | 32·6 | 29·1 | 48 |
| 8. Madhya Pradesh | 32 | 28 | 34·9 | 31·3 |
| 9. Madras | 46 | 42·4 | 64 | 69 |
| 10. Mysore | 37·3 | 36 | 49 | 46 |
| 11. Nagaland | | | 187 | 309 |
| 12. Orissa | 33 | 30 | 45 | 44 |
| 13. Punjab | 99 | 83 | 115 | 145 |
| 14. Rajasthan | 68 | 91 | 101 | 96 |
| 15. Uttar Pradesh . | 37 | 40·8 | 44 | 40·4 |
| 16. West Bengal . . . | 95 | 68 | 76 | 102 |
| 17. Andaman & Nicobar Islands | 97 | 99 | 99 | 128 |
| 18. Himachal Pradesh | 39 | 38 | 64 | 78 |
| 19. Manipur . | 84 | 71·8 | 118 | 130 |
| 20. Tripura | 79 | 108 | 218 | 318 |
| 21. NEFA | .. | .. | 60 | 63 |
| All India . . . . . | 44 | 41·6 | 48 | 52 |

**3.101. The 1960 Food and Agriculture Organisation Regional Conference for Europe discussed the need for and desirability of national forestry funds. It concluded that "the formation of such a fund may be necessary since afforestation can only be a long term investment, requiring continuity of plans....."** Several European countries have either established forestry funds or adopted other methods to ensure flow of necessary funds for forest development.

3.102. The Ninth Commonwealth Forestry Conference held in New Delhi in January, 1968 also recommended the creation of a Forest Development fund on national or regional basis to promote planting of forests.

3.103. A forestry expert in a note submitted to the Committee has also stressed the need of Forest Development Fund. He has suggested that extra revenue available on account of clear-felling of forest area to be submerged in a river valley project or some exceptional circumstances like good cultural or protective work done, should be utilised for raising forest plantations. He has also suggested that forest raw material for industries should be made available to industries on payment of royalty fixed through competitive tenders or the State Governments should give subsidy to the Forest Departments for the development of forest resources.

3.104. During evidence, the Committee have been informed that the question of creating a Sinking Fund for forest development had been discussed by the Central Board of Forestry. The Board took note of the proceedings of the Standing Committee meeting held at Mussorie in 1968 on the question of creating special funds from the earnings of the Forest Department for taking up new plantations. The Board did not recommend the setting up of any such fund. But the importance of providing sufficient funds for raising large scale plantations was stressed and the States were requested to make generous provision for that purpose.

3.105. At Bhubaneswar meeting of the Central Board of Forestry in December, 1960, the matter was again discussed. In a note submitted by the Development Minister of Orissa for the consideration of the Board, it was pointed out that revenue obtained from irregular fellings as a result of large scale disforestation for rehabilitation, industrial and other developmental schemes was being treated as regular forest revenue, without adequate safeguard to plant up equivalent forest areas. It was, therefore, suggested that all revenue coming from such irregular sale should be credited under forest development fund to be operated by the Chief Conservator of Forests for afforestation, in consultation with Government and Accountant General. The Board, therefore, agreed to recommend to the State Governments that out of forest or other revenues, funds should be set aside specifically for the development of forests. It was also agreed that so far as forests were concerned, five year developmental programmes were not enough and that long term planning was necessary.

The question was again on the agenda of the Board at its meeting held at Trivandrum in December, 1963. It was felt that the question

of allocation of a portion of forest revenue for forest development programmes should be left to the States and no recommendation of the Board was necessary.

3.106. Explaining the reasons as to why the 'Sinking Fund' could not be created, the representative of the Ministry stated that it was a matter of budget procedure and it had not been agreed to by the State Finance Departments as the latter had to utilise all the available resources for financing their Five Year Plan Schemes and hence the revenue under a particular head could not be utilised directly under that head for expenditure.

3.107. Elucidating the above point further, the representative of the Ministry of Finance Stated as under:—

> "Whatever revenue is earned by the State Government is pooled towards the Plan resources and when the size of the plan is fixed, all these sources of revenue are taken into account by the Planning Commission. So there is no extra fund left over which could be allocated for any other purpose. At the time the allocation of funds is made to various sectors the State Government can give any priority to any particular sector, and the State Government will be fully justified to give higher priority for the forestry programme, but it cannot be laid down that the extra income from the forest resources would be utilised for development of forests or plantations, because no particular revenue is earmarked for any particular purpose."

3.108. Asked why the extra income earned by the State Forest Departments as a result of clear felling etc. could not be allowed to be utilised for raising compensatory forest plantations elsewhere, the representative of the Ministry stated that this aspect had been examined and was being pursued. The recommendation of the Central Board of Forestry to the effect that in the original estimates of the river valley projects, the price of the forests which was taken over should be mentioned and that such money should be made available for raising plantations elsewhere, had been insisted upon but no agreed solution had so far emerged. The question had been taken up in the first instance with the Planning Commission and the Union Ministry of Irrigation and Power. The Planning Commission had yet to come to a definite conclusion.

3.109. The Committee note that the sinking fund for the development of forests, which was recommended in the National Forest Policy Reso-

lution has not yet been created for various reasons. They further note that compared to forest revenue, the proportion of expenditure on development of forests in the States during the three Plan periods has ranged between 41.6% to 52% only. They understand that the revenues earned by the State Government under a particular head are not made available for expenditure under the same head as they are pooled towards total Plan resources for financing the various plan schemes. The Committee feel that in the interest of the development of forestry which is a long term process but is essential for the economic and agricultural prosperity of the country, there is need to provide adequate funds on a continuous basis to achieve the desired results. In this connection they would suggest that the methods followed in other countries for financing forest development may be considered by the Central Board of Forestry for adoption in the country with the necessary modifications. The Committee would further suggest that adequate financial provision should be made to raise plantations in equivalent areas when large scale forest areas are submerged or deforested for river valley and industrial projects etc.

## M. Re-appraisal of Policy

3.110. Since the declaration of the National Forest Policy in 1952, the country has had three Five Year Plans. During these Plan periods and thereafter, various measures have been taken both by the Central as well as State Governments, for the development of forests and forestry in the country. Yet, we find that the proportion of the area under forests to the total land area in the country as a whole is less than the required one third, is disproportionately distributed in different regions and is also not properly maintained and utilised. The average productivity is lowest in the world, the main reason being that a large forest area is poorly stocked or not stocked at all. Thus the major produce of the forests i.e. wood is not available in adequate quantity even to meet the existing demand whether for fuel or for raw material to feel the wood-based industries.

**3.111. The Committee are of the opinion that it is high time that a re-appraisal of the National Forest Policy be made by an ad hoc body of experts in the light of experience gained during these seventeen years and the research and technological advancements made in the international field of forestry and suggest other suitable changes in the existing policy as to make the new revised policy a more purposeful, realistic and effective apparatus for the development of forests and forestry in the country.**

## IV. DEVELOPMENT PLANS

4.1. For soil and water conservation and satisfaction of the present and perspective demand of the people for fuelwood and of the industries for industrial woods and other raw materials, forest development is regarded as a *sine qua non* for the economic progress of the country. The gap between the present as well as perspective demand of the forest products in view of the growing population and rising standard of living has been estimated to be substantial and can be narrowed down only with the planned growth and development of forests. During the First Five Year Plan, the programme of development of forests included (i) strengthening of forest administration in the regions where large territories had merged or transferred to State consequent on abolition of Zamindari and Jagirdari, (ii) renovation of areas over-exploited to meet war requirements, (iii) aflorestation where large scale soil erosion occurred, (iv) development of forest communications, and (v) stepping up supplies of timber by increased use of non-conventional species after proper seasoning and treatment by chemical methods and therefore increasing the number of seasoning kilns and treatment units. Emphasis was laid on the importance of the establishment of village plantations for increasing the supply of fuel and fodder; raising plantations of industrial and commercial uses; intensification of the production of minor forest products; programmes for forest research and education; and establishment of Forest Labour Cooperative Societies. Afforestation schemes were mainly oriented to the consolidation, conservation, protection and rehabilitation of the degraded forests.

4.2. In the Second Plan, besides continuing, wherever necessary, work on schemes initiated during the First Plan, the programme included (i) afforestation and improvement of poorer areas in the forests and extension forestry, (ii) formation of plantations of species of commercial and industrial value, (iii) promotion of methods for increased production and availability of timber and other forest produce in the immediate future, (iv) amelioration of the conditions of staff and labour in forests, (v) increased tempo of forest research, (vi) increased provision of technical personnel and (vii) central coordination and guidance in the implementation of forest development schemes all over the country. Besides, it recommended various short-term measures to help in increasing the output such as adoption of better techniques for timber extraction, development of communications and increased use of preservation and seasoning

processes. Schemes for survey and demarcation and preparation of maps were also proposed to be undertaken.

4.3. In the Third Five Year Plan, it was proposed not only to intensify the programmes initiated under the First and Second Plans but also to put special emphasis on measures such as introduction of improved logging tools etc., development of forest communications, and pre-investment survey of forest resources which would help meet the long-term requirements of the country and ensure more economic and efficient utilisation of the available forest products, including inferior timber and wood residues. As the various schemes during the Third Plan were oriented towards attaining self-sufficiency in industrial timber, fuelwood and other forest products, large scale plantations of industrially valuable species were undertaken. These schemes have been continued during the last three years also.

**A. Financial Allocation and Actual Expenditure during the Plan periods.**

4.4. The financial provision for the development of forestry during each of the Plan periods and 1966-67 and 1967-68 and actual expenditure incurred against them are indicated below:—

(Rs. in lakhs)

| | Central Sector | | | | State Sector | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Central Schemes | | Centrally sponsored schemes. | | Allo-cation. | Expen-diture. | Alloca-tion. | Expendi-ture. |
| | Allo-cation. | Expendi-ture | Allo-cation. | Expendi-ture. | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| First Plan. | 200·00 | 100·00 | | | 850·55 | 749·35 | 1050·55 | 849·35 |
| Second Plan. | 146·50 | 98·05 | | | 2185·15 | 2001·94 | 2331·65 | 2099.99 |
| Third Plan. | 306·00 | 63·29 | 281·32 | 371·19 | 4399·12 | 4150·34 | 4986·44 | 4584·82 |
| 1966-67 | 32·02 | 29·84 | 228·81 | 238·88 | 1286·35 | 1009·34 | 1547·18 | 1278·06 |
| 1967-68 | 40·71 | 39·26 | 292·70 | 298·24 | 1168·46 | 1220·28 | 1501·87 | 1557·78 |

4.5. State-wise financial allocations and expenditure incurred on State Forestry Development Schemes during the First, Second and Third Five Year Plans are as under:—

(Rs. in lakhs)

| State/Union Territory | First Plan (1951—56) | | Second Plan (1956—61) | | Third Plan (1961—66) | |
|---|---|---|---|---|---|---|
| | Plan Provision | Expenditure | Plan Provision | Expenditure | Plan Provision | Expenditure |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Andhra Pradesh | 18·64 | 26·46 | 102·40 | 97·13 | 128·21 | 132·16 |
| Assam | 36·30* | 47·40 | 92·91* | 110·00 | 101·07 | 95·10 |
| Bihar | 125·00 | 124·20 | 128·74 | 286·89 | 241·02 | 258·19 |
| Gujarat | † | 19·69 | 129·03 | 102·19 | 232·75 | 165·15 |
| J. & K. | 6·85 | 3·34 | 58·90 | 36·83 | 75·00 | 68·82 |
| Kerala | .. | | 114·12 | 30·99 | 338·00 | 210·52 |
| Madhya Pradesh | 125·49 | 122·61 | 289·75 | 196·00 | 600·00 | 417·83 |
| Madras | 33·63 | 30·00 | 131·77 | 146·81 | 212·00 | 270·38 |
| Maharashtra | 104·80* | 22·91 | 163·62* | 124·00 | 283·56 | 410·88 |
| Mysore | 9·59 | 8·52 | 103·37 | 106·00 | 289·00 | 271·04 |
| Nagaland | ** | ** | 6·15 | 5·00 | 12·00 | 79·51 |
| Orissa | 13·44 | 13·29 | 47·74 | 49·38 | 233·17 | 229·80 |
| Punjab (Composite) | 61·60* | 59·44 | 151·42* | 117·90 | 278·00 | 251·80 |
| Rajasthan | 32·40 | 31·60 | 125·00* | 131·00 | 195·22 | 147·60 |
| Uttar Pradesh | 165·20* | 138·82 | 229·40 | 246·00 | 595·99 | 601·53 |
| West Bengal | 63·74 | 53·02 | 131·61 | 121·00 | 182·00 | 150·69 |
| A&N Islands | .. | | 80·00 | 12·37 | 56·82 | 42·07 |
| Delhi | 2·20 | 2·70 | 11·40 | †† | 4·00 | 3·29 |
| Goa, Daman & Diu | | | .. | .. | 45·00 | 31·32 |
| H.P. (Erst-while) | 11·52 | 11·77 | 36·14 | 35·40 | 184·00 | 186·80 |
| Manipur | 3·00 | 3·00 | 3·22 | 4·00 | 25·51 | 18·250 |
| N.E.F.A | 26·17 | 23·15 | 34·02 | 28·48 | 42·80 | 56·56 |
| Tripura | 10·98 | 7·43 | 14·44 | 14·57 | 44·00 | 51·05 |
| TOTAL | 850·55 | 749·35 | 2185·15 | 2001·94 | 4399·12 | 4150·34 |

*Due to non-availability of revised plan provision of the States. Original plan provision figures as given in the Five Year Plans issued by the Planning Commission have been shown.

† Included under Maharashtra.

** Included under Assam.

†† Achievements were included under Soil Conservation Scheme, separate figures in respect of Forestry Schemes are not available.

*Central assistance to the States.*

4.6. The Committee have been informed that the data regarding the amount of Central grants and loans released to the States prior to 1957-58 is not readily available. During the last three years of the Second Five Year Plan, Third Five Year Plan period, 1966-67 and 1967-68, the total amount of loans and grants released for State Forestry Schemes is as given below:—

(Rs. in lakhs)

| Period | Loans | Grants |
|---|---|---|
| Second Plan (for 1958-61 . . . . | 942·68 | 440·36 |
| Third Plan . . . . . | 2156·43 | 534·74 |
| 1966-67 . . . . . | 236·43 | 43·95 |
| 1967-68 . . . . . | 247·28 | 178·92 |

4.7. It has been stated that the Central assistance upto the year 1963-64 was finalised under the combined head "Forest and Soil Conservation". As such the figures upto that year include assistance for State Plan Soil Conservation schemes also. It has also been mentioned that the assistance released for the last three years is provisional and subject to final adjustment on the receipt of actual audited figures of expenditure for those years.

4.8. During the Third Five Year Plan, all the schemes, except the scheme of "Plantation of Quick Growing Species" were included in the State Sector. The pattern of Central assistance for the implementation of all the State Schemes except two, namely, 'Forest Resources Survey' and 'Farm Forestry-*cum*-Fuelwood Plantations' has been 20 per cent grant and 30 per cent loan. As for Forest Resources Survey Scheme, the pattern of assistance is stated to be Rs. 250 per sq. mile (50 per cent grant and 50 per cent loan) and for Farm Forestry-*cum*-fuelwood Plantations the assistance is 50 per cent grant limited to Rs. 12.50 per acre or Rs. 31 per ha. The same pattern has continued till the year 1967-68.

4.9. The pattern of Central assistance for the Centrally Sponsored Scheme, *viz.* "Plantations of Quick Growing Species", which was introduced in the Third Plan and continued subsequently, has been 100 per cent grant subject to a ceiling of Rs. 200 per acre. The assistance is released on the basis of area brought under plantations. The amount of the grant which has been released for the purpose in the Third Plan

period and 1966-67 and 1967-68 is approximately Rs. 371 lakhs, Rs. 239 lakhs and Rs. 298 lakhs, respectively.

4.10. Asked as to how the Centre keeps a watch on the proper utilisation of the assistance given to the States, it has been stated that under the existing procedure, Central assistance given to States for Plan schemes is finalised on the basis of audited figures of expenditure submitted by the respective Accountants-General who certify the proper utilisation of funds under the appropriate heads. According to the Ministry, this procedure exercises an effective control on the utilisation of assistance by the State Governments for plan schemes.

4.11. In regard to a suggestion that in order to give an incentive to the States to spend more on forestry, matching grant system might be adopted, it has been stated during evidence by the representative of the Ministry of Finance that States are now resisting that system. The National Development Council has recommended that for the Fourth Plan, there should be block grants, States being free in the same block to spend as they think best; there should be no scheme-wise allocation.

**4.12. The Committee note that there has been persistent shortfalls in expenditure compared to financial provision made for the development of forestry schemes during the three Plan periods, both in the Central and State sectors. The extent of shortfalls was of the order of Rs. 201.20 lakhs, Rs. 231.66 lakhs and Rs. 401.62 lakhs respectively during each of the three Plan periods in both the sectors. The shortfalls in the Central Sector amounted to Rs. 100 lakhs, Rs. 48.45 lakhs and Rs. 152.84 lakhs and in the State Sector Rs. 101.20 lakhs, Rs. 183.21 lakhs and Rs. 248.78 lakhs respectively. The Committee further note that in some of the States like Gujarat, Jammu and Kashmir, Kerala, Madhya Pradesh and West Bengal etc. the shortfall has persisted in each of the three Plan periods. The Committee are concerned over these non-utilisation of plan provisions particularly when one of the major handicaps in the development of forestry in the country is stated to be inadequate provision of funds. They consider that if the schemes had been formulated properly and timely coordinated action taken for their implementation, it should have been possible for the Centre as well as the States to utilise the provisions fully. The Committee are, however, glad to note that during 1967-68 there has been full utilisation of the funds made available for the development of forestry both by the States as well as the Centre. The Committee hope that this trend would be continued. They would urge that the schemes to be included in the 4th Plan should be formulated after detailed scrutiny in the light of past experience and provision and targets should be fixed on a realistic basis.**

## B. (i) Central Schemes

4.13. The Central schemes undertaken during the three Plans related mainly to forestry research, education and training and preservation of wild life. In the Third Plan, two additional schemes *viz.* 'Pre-investment Survey of Forest Resources' and 'Logging Training Centres' were undertaken.

### (i) *Pre-investment Survey of Forest Resources*

4.14 The Pre-investment Survey of Forest Resources Project has been undertaken in collaboration with the United Nations Development Programme and Food and Agriculture Organisation. The purpose of the Project is to assist the Government of India in the development of the country's forest resources and associated forest industries by conducting surveys employing modern methods and techniques. Under this Project, aerial surveys supplemented by ground surveys are carried out in the highly potential areas of 11,500 sq. miles in the States of Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Orissa, Andhra Pradesh, Kerala etc. The three zones comprising of an area of 11500 sq. miles in which work has been carried out are:—

(1) *Northern Zone*:—In the States of Himachal Pradesh and Uttar Pradesh covering an area of 2,500 sq. miles.

(2) *Central Zone*: Primarily in the State of Madhya Pradesh but spilling over into the adjoining States of Orissa and Andhra Pradesh covering an area of 7,200 sq. miles.

(3) *Southern Zone*:—In the State of Kerala, covering an area of 1,800 sq. miles.

4.15. The salient features of the Project have been stated to be—

(1) To conduct a detailed inventory of the wood-resources available in the three zones using aerial photographs and photo-interpretation techniques alongwith field inventory methods and automatic data processing technique.

(2) To conduct detailed cost studies to assess the quantities of wood raw material available at pre-determined sites with reference to infra-structure of roads, transport facilities and logging methods available in the area.

(3) To conduct detailed investigations into the suitability of the sites for the location of wood-based industries.

(4) To study the economics of the establishment of recommended industries and draft feasibility reports.

(5) To conduct market studies to assess the demand at present and in future for wood raw material.

4.16. An agreement (Plan of Operation) was signed for the purpose by the United Nations Special Fund (U.N.S.F.), Food & Agriculture Organisation and the Government of India in February, 1965. The work on the Project was commenced in October, 1965. The work is stated to have been completed by 31st October, 1968 when the United Nations collaboration has ended.

4.17. The Government of India exercised overall supervision and control over the execution of the Project through the Inspector General of Forests who was the Project Director. The Project Director worked in close cooperation with the Project Co-Director (who was a Food and Agriculture Organisation Expert) in the administration and execution of the Project. The Project Director was assisted by a Chief Executive Officer as counterpart to the Project Co-Director and other technical and administrative staff. Similarly, the Project Co-Director had also other foreign experts to assist in the Project. Under the Project, two zonal field parties—one at Jagdalpur (M.P.) and the other at Simla (H.P.)-had been set up to conduct ground surveys and collect all field data in the selected areas of States of Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Andhra Pradesh, Maharashtra, Kerala and Mysore. A Forest Inventory Section had been set up at Dehra Dun for inventory design, photo-interpretation, data processing and preparation of topographical and forest type maps etc. This Section was assisted by the Forest Survey Section, especially set up at the Survey of India, in regard to aerial photography, supply of prints, mapping etc.

*Plan Provision and Expenditure.*

4.18. It has been stated that as against Government of India's committed contribution of Rs. 89 lakhs (estimated expenditure on counterpart services and supplies in kind), an amount of Rs. 68.50 lakhs has been spent upto July, 1968. An expenditure of Rs. 6.21 lakhs is expected to be incurred by the end of October, 1968, the date for the termination of the Project. Thus, the total expenditure on the Project comes to be Rs. 74.41 lakhs against the estimated committed contribution of Rs. 89 lakhs by Government of India.

*Work done*

4.19. The Committee have been informed that the following work has been done under the Project:—

"(1) Inventory work in all the three selected zones covering a total area of 11,500 sq. miles has been completed. This has

been based on photo-interpretation of aerial photographs combined with ground sampling. In each zone nearly 400 field plots were measured and on the photographs more than 20,000 points were interpreted. All the data which were very extensive have been processed on an electronic computor.

(2) The total volume of the growing stock in the forests of three selected zones has been calculated and cutting calculations have been made to assess the annual cut.

(3) A comprehensive study for the purpose of setting up wood-based industries has been carried out to determine the situation with regard to markets, available resources and the drain from the forests etc.

(4) Cost studies have been carried out for determining the economics of exploitation and transportation of raw material to likely factory sites.

(5) Wood tests have been carried out in India and abroad to determine the suitability of a mixture of hard woods of Bastar Region for pulping and paper making. The results have been very encouraging; and it has been established that the bulk of the hard-wood resources could be used for paper making. Similar tests have been carried out for the use of hard woods for manufacturing rayon grade pulp. Investigations have been carried out for the location of pulp, paper rayon and newsprint mills in the Central and Southern Zones. A total of 21 different models of industrial plants have been investigated with regard to alternate sites, capacities and products.

(6) The role of industrial plantations of quick growing species in supplying raw material to industries has been studied. Seeds of exotic conifers have been imported and supplied to the State Forestry Research Centres for trial.

(7) Indian officers have been trained to continue this work without any foreign technical aid."

4.20. Under the project, 29 officers are stated to have been trained for conducting the surveys, processing of data, etc. It has been mentioned that personnel were drawn for the Project from various States and Organisations on deputation basis. They reverted to their respective States on expiry of deputation period. Some State representatives were sent on Fellowships under the Project for training in foreign countries.

*Follow-up action*

4.21. On being asked whether any wood based industry has been established as a result of the data provided by this Survey, the Committee have been informed that the Project Report is in the process of being drafted and final report may be available after another three months' time after they have consulted their Food and Agriculture Organisation's Headquarters at Rome. Concrete proposals for the estbalishment of wood-based industries would be formulated only thereafter.

4.22. In reply to a question, the representative of the Ministry has stated that no action can be taken on interim report as the feasibility and other things have to be worked out. The representative of the Ministry has also stated that the Director General, Technical Development has tentatively worked out a feasibility report for putting up a large-sized newsprint mill in Kerala and a big paper mill in Bastar region. But for that too, final report is to be awaited.

4.23. The Committee have also been informed that the scheme is proposed to be extended during the Fourth Plan to cover an area of 75,000 sq. Km. in the following four zones, with an outlay of Rs. 160 lakhs:—

| Zone | Area to be covered |
|---|---|
| (i) Northern Zone | 20,000 sq. kms. |
| (ii) Eastern Zone | 10,000 ,, ,, |
| (iii) Central Zone | 25,000 ,, ,, |
| (iv) Southern Zone | 20,000 ,, ,, |

The essential activities of the follow-up scheme would include—(a) reconnaissance (b) estimation of various potentials of raw materials, (c) periodic check and re-inventories, (d) cost analysis, (e) industrial investigations (f) wood tests, (g) preparation of industrial management plans, (h) data processing, and (i) topographical mapping.

**4.24. The Committee are happy to note that in undertaking the pre-investment survey of forest resources, an attempt has been made towards a more intensive utilisation of our forest wealth. They have no doubt that the survey would provide useful data regarding the availability and distribution of different types of raw materials in the concerned forest areas which would help in meeting the shortage of raw material for forest-**

based industries in the country. It will also throw light on the measures required for the full development of these forest areas. The Committee hope that immediately after the finalisation of the project report by U.N. Experts, speedy steps would be taken to process it further in cooperation with the Director General of Technical Development for the preparation of feasibility reports for the establishment of new forest-based industries and expansion of the existing ones.

4.25. The Committee are also happy to note that the pre-investment survey scheme is proposed to be extended during the Fourth Plan. There are vast areas still lying untapped which offer potentialities for the development of forest-based and other industries. The Committee trust that the physical and financial targets to be fixed for the Fourth Plan would be completed and that they would provide continuous and further reliable information regarding the existing and potential sources of raw material for forest-based industries in the country.

(2) *Logging Training Project*

4.26. Logging (timber harvesting) has by and large, not received adequate attention in the past. This neglect has resulted in considerable loss of timber and has meant increase in the cost of extraction. It has been stated that Government of India considered this problem and also obtained the advice of Food and Agriculture Organisation Experts. As a result of the investigations by the experts, it was decided to start a Training Project on Logging in collaboration with United Nations Development Programme and Food and Agriculture Organisation in August, 1965 for a period of four years. The Project started functioning from the 24th August, 1965 and it is scheduled to be completed in August, 1969.

*Purpose of the Project*

4.27. The fundamental purpose of the Project is to train Indian forestry personnel in the following fields of logging in order that they may in turn train forest workers and thus improve logging practices in the forests:—

(a) Planning and studies of efficiency of logging operations under different conditions.

(b) Operation and maintenance of mechanical Logging equipment including Cableways, Winches, Tractors, Trucks, Loading Devices and Portable Sawmills.

(c) Basis Logging techniques including the use and maintenance of hand-tools and power saws, felling techniques, hauling manually and with draft animals and other non-mechanical transportation means.

*Administration*

4.28. The overall supervision and control in the execution of the Project is exercised by the Government of India through the Inspector General of Forests, who is the Project Director. The Food and Agriculture Organisation Expert is the Project Co-Director. The Government of India have appointed a senior officer as Chief Executive Officer as counterpart to the Project Co-Director with Headquarters at Dehra Dun and to assist the Project Director in the implementation of the Project. The Chief Executive Officer is assisted by other technical and administrative staff.

*Financial provision and expenditure*

4.29. The total estimated cost of the Project is Rs. 27.18 lakhs. The U. N. contribution towards the Project is also the same. The financial provision and the expenditure incurred on the project each year is as follows:—

(Rs.)

| Year | Budget estimates | Revised estimates | Actual expenditure |
|---|---|---|---|
| 1965-66 . | 200,000 | 300,000 | 305,700 |
| 1966-67 . . | 440,000 | 510,000 | 511,078 |
| 1967-68 . | 550,000 | 541,300 | 570,900 |
| 1968-69 . (up to July, 1968). | 572,000 | .. | 146,121 |

Thus the total expenditure incurred upto the end of July, 1968, is Rs. 15,33, 499. 00.

*Training Centres*

4.30. Under the Project, five Training Centres, one each at Dehra Dun (U.P.), Chandrapur (Maharashtra), Coimbatore (Madras), Sukna (West Bengal) and Kulu (Himachal Pradesh) have been set up with effect from 15th September, 1965, 7th April, 1966, 1st October, 1966,

15th April, 1967 and 31st March, 1967 respectively. The nature and duration of the course of training and the capacity of each Centre for different courses are indicated as under:—

| Name of Centre/course | Duration of the course. | Capacity per course. |
|---|---|---|
| 1. *Dehra Dun Centre* | | |
| (a) Basic -Logging Course | 2 months | 12 trainees |
| (b) Planning and studies etc. course. | 11 weeks | 15 ,, |
| (c) Tractors, Trucks and loading devices | 3½ months | 12 ,, |
| 2. *Chandrapur Centre* | | |
| (a) Basic logging course. | 2 months | 12 ,, |
| (b) Portable Saw-mills course | 3½ months | 12 ,, |
| 3. *Coimbatore Centre* | | |
| Basic Logging Course | 2 months | 12 ,, |
| 4. *Sukna Centre* | | |
| Basic Logging Course | 2 months | 12 ,, |
| 5. *Patlikuhl- Kulu Centre* | | |
| Cableways and Winches Course | 5 months | 10 ,, |

*Training impact*

4.31. The Committee have been informed that the first course in the Logging Training Commenced in September, 1965. It has been stated that the trainees of the State Governments|Union Territories are mostly trained to be Instructors in the respective subjects so that when they go back to their respective States|Union Territories, they are in a position to impart training to the forest workers on modern methods of logging like good trained teachers. This work of training of the workers has been initiated by the trained people in most of the States/Union Territories immediately after their return. It has been stated during evidence that after completion of training, each, trainee is given a set of equipments on which he has been trained.

*Follow up programme*

4.32. A follow-up training programme has been organised under which one foreign expert accompanied by his Indian counterpart visits

the States/Union Territories in each region. Accordingly, 4 foreign experts for Northern, Southern, Eastern and Western Regions are visiting various States/Union Territories for organising the follow-up programme. In the month of October-November, 1968, regular training courses were run in the States of Jammu and Kashmir and Bihar, where workers belonging to the forest contractors and the Forest Departments have been imparted training for 2 weeks courses in their areas with 10 trainees in each course. Similar courses are proposed to be arranged in the States of Haryana, Mysore, Andhra Pradesh, Madhya Pradesh, Gujarat, Bihar and Orissa. These foreign experts are associated with the programme upto the end of June, 1969. On an average they have to organise about 2 courses for the training of workers in each State|Union Territory. Thereafter, the States/Union Territories will organise regular follow-up programmes for the workers with their own resources and with the help of the Instructors trained at the Project. It has been stated that the workers thus trained all over the country would provide a nucleus for spreading and popularising modern methods of logging.

*Personnel trained*

4.33. The total number of persons to be trained during the Project period, and the number of persons trained upto 25th November, 1968 in different courses are given below:—

| | Number of persons | |
|---|---|---|
| | to be trained | actually trained. |
| 1. Basic Logging . . . . | 732 | 469 |
| 2. Planning and Studies of efficiency of logging operations . . . . . | 165 | 91 |
| 3. Tractors, Trucks and Loading Devices course | 70 | 75 |
| 4. Cableways and winches course. | 120 | 69 |
| 5. Portable sawmill course . . . . . | 120 | 52 |

In addition, following number of persons are stated to have received training :—

(i) Special short course of training in Logging Operations etc. to the Senior Forest Officers . . . . . 10

(ii) Special course on Power China saws . . . . 21

(iii) Workers trained in Basic Logging . . . 112

4.34. The total number of persons trained for each State/Union Territory is as under:—

| | Number of persons trained |
|---|---|
| Andhra Pradesh | 62 |
| Assam | 3 |
| Bihar | 13 |
| Gujarat | 36 |
| Haryana | 11 |
| Jammu & Kashmir | 38 |
| Kerala | 3 |
| Madhya Pradesh | 112 |
| Madras | 45 |
| Maharashtra | 128 |
| Mysore | 34 |
| Nagaland | .. |
| Orissa | 1 |
| Punjab | 13* |
| Rajasthan | 5 |
| Uttar Pradesh | 63 |
| West Bengal | 78 |
| *Union Territories* | |
| Himachal Pradesh | 47 |
| Manipur | 1 |
| Andaman & Nicobar Islands | 4 |

4.35. Asked during evidence as to how the trainees from various States are selected, the representative of the Ministry has stated that in the initial stage no restriction was placed and all the persons sponsored by States were admitted to the training. But when the number increas-

*11 persons were got trained by the Punjab Government before re-organisation. It is understood that all of them are in Himachal Pradesh.

ed, the seats had to be apportioned among the States according to the exploitation work done by them.

4.36. It has also been stated that where the response was not good, States concerned had been approached to send trainees.

*Scheme in Fourth Plan*

4.37. The Committee have been informed that after the completion of the Project in August, 1969, the functions of the Project will be taken over by the Forest Research Institute and Colleges, Dehra Dun. Accordingly a scheme with an estimated provision of Rs. 13 lakhs is proposed to be included in the Fourth Plan to carry on the follow-up training work for a period of first 2½ years of the Plan. The Logging Branch of the Forest Research Institute & Colleges, Dehra Dun, will assist the State Governments in running the training of workers in various States.

**4.38. The Committee consider that one of the major bottlenecks in the Indian Forestry has been the age old technique of incomplete harvesting of wood resources which involved wastage. These methods were evolved at a time when such wastage could be afforded as there was not much demand for wood and the forest resources were abundant. Today, when in view of the growing population pressure and advanced modern living, the gap between supply and demand of wood has widened, its efficient use like that of other scarce raw materials is a pre-requisite for economic prosperity. It is necessary that all wastage of wood is reduced to the minimum by improving logging methods. The Committee are glad to note that the Logging Training Project has been taken up by the Government of India in collaboration with the United Nations Development Programme and Food & Agriculture Organisation for training Indian forestry personnel in the various specialised fields of logging operations. The Committee have no doubt that this project will result not only in the increasing use of latest logging techniques and methods for the extraction of timber but will also considerably reduce wastage of timber involved by the use of age old techniques of timber harvesting in the country.**

**4.39. The Committee are, however, unhappy to observe that except Dehra Dun Centre which started functioning from the middle of September, 1965, the other four Centres were set up six to eighteen months after the commencement of the Project. The delay in setting up these Centres has had its advance effect on the number of persons trained in various courses as is evident from the fact that while out of the total period of four years of the Project, about three years and a quarter have already expired, the percentage of trainees turned out in the courses of Basic Logging, Planning and Studies, Operation & Maintanance of mechanical**

logging equipment and operation & Maintenance of Portable Sawmills has been only 64, 54, 57 and 43 respectively of the targeted figures. The Committee hope that such delays would be avoided in future.

4.40. The Committee note that the number of trainees from nearly half of the States viz. Assam, Bihar, Kerala, Orissa, Punjab and Rajasthan and Union Territories of Andaman and Nicobar Islands and Manipur is negligible. From Nagaland and some of the Union Teeritories like Tripura, Goa, Daman & Diu etc. not even a single person has so far received any training at the Project. They suggest that efforts should be made to persuade these States and Union Territories to sponsor adequate number of persons to avail of the training facilities in the various courses of the Project.

4.41. The Committee further note that training of workers by the Instructors who have reverted to their respective States after getting training under the Project, is being followed up by the foreign experts. They also note that after the completion of the Project in August, 1969, the training programme is proposed to be continued by the Forest Research Institute & Colleges, Dehra Dun and that a scheme for the purpose is being included in the Fourth Plan. They recommend that while fixing the financial and physical targets for the proposed scheme, the present as well as future needs of all the States|Union Territories should be properly assessed and taken into consideration. It would also be advisable to watch training utilisation in the harvesting operations in the States and provide for refresher courses for trained personnel.

*Modern Logging Equipments*

4.42. The Committee enquired as to how many States had introduced modern logging techniques in their forest operations, the representative of the Ministry stated that according to their information, Himachal Pradesh, Uttar Pradesh, Maharashtra, Andhra Pradesh and Jammu and Kashmir were using them, though not extensively.

4.43. Subsequently, in a written note the Ministry have stated as under:—

> "Practically every State in the country is now trying to introduce modern logging technique in their forestry operations. Most of the States are now introducing departmental logging and some of the States have Forest Cooperative Societies and Forest Corporations. As a result of these developments, the chances of introduction of modern logging techniques are even brighter. A study has been made in the project about the

total requirements of the modern tools, and whenever any State wants to work out a plan for introduction of modern techniques, the Logging Training Project always gives the necessary advice with regard to the calculation of expenditure, trained personnel, etc."

4.44. As regards the availability of modern logging equipments, the Committee have been informed that the same are neither available in the country nor are being imported. So far operations are being carried on with the indigenous equipments. Swedish Government under a bilateral agreement have given sets of modern equipments for the use of instructors who are trained under the Project to go back to States for training the workers.

4.45. The Committee have also been informed that efforts are being made within the country to manufacture the latest type of equipments. Besides State Industries Departments of U.P. and Mysore, some other firms have undertaken the manufacture of these equipments with indigenous steel. But these manufacturers want to know the likely demand for which information is being collected from the various State Governments and Cooperative Societies.

4.46. In reply to a question as to how the equipments manufactured indigenously compare with foreign equipments, the President, Forest Research Institute, stated as follows:—

"In manufacturing these tools, the basic requirement is the steel. The steel which we have got in the country is much softer and does not compare very well with the Swedish steel and other steel. The instruments and the basic tools which we got manufactured at Roorkee and by some other firms were tested and they were not found quite satisfactory. So, we have told the manufacturers again to improve upon them. An effect will have to be made also to provide good steel which is the basic requirement."

4.47. In reply to a written question, it has been stated, 'so far no effort has been made to provide the manufacturers with the required quality of steel. The attempts so far made have been only to interest the manufacturers in the manufacture of latest type of tools. Some manufacturing concerns are now actively taking up the manufacture of the modern logging tools and they hope that in due course, the metallurgy in the country will itself improve which will make the desired quality of steel available indigenously. Swedish steel is, of course, the best, but so far no manufacturer has really asked for, on very concrete basis, for the supply

of better quality steel. As and when such a demand is made, the cases will be dealt with for procuring the good quality steel by recommending imports to the desired extent.

4.48. Asked what efforts are being made to encourage introduction of the improved equipments, the representative of the Ministry has stated that during the training, trainees are impressed upon that by using these improved saws, the efficiency improves and the out-turn is much more. Efforts are also being made to introduce these better tools in all the Departmental working, and through the cooperative societies and corporations wherever they have been started.

4.49. It is understood that the question regarding the manufacture of logging tools within the country has been discussed by the Central Board of Forestry as also its Standing Committee from time to time. At Trivandrum meeting of the Board held in December, 1963, the Secretary of the Board stated that the Swiss offer of assistance for manufacture of logging tools had been received in the Ministry of Industry and efforts were being made to find out whether any private firm could undertake their manufacture. After this was done, it was explained, these implements would be manufactured on a very large scale. The Board decided that the whole question may be discussed with the Department of Technical Development and experimental orders may be placed with the indigenous manufacturers and other requisite steps taken with a view to speeding up the manufacture of these tools. At the Standing Committee meeting held at Poona in June, 1964, a Technical Committee consisting of Inspector General of Forests as Chairman and the Chief Conservators of Forests of Andhra Pradesh, Assam, Madhya Pradesh, Mahaashtra, Mysore and Rajasthan as Members, was constituted to go into the question of the usefulness of the logging tools and the introduction of mechanised tools and give their expert opinion thereon. The matter again came up at the Shillong meeting of the Standing Committee held in April, 1966 when it was decided that 'firm demands from the States should be assessed and the matter processed further.' The Board at its Tenth meeting held at Simla in October, 1966 resolved that the question be processed expeditiously. The Standing Committee at its Bhopal meeting held in September, 1967 further considered the matter and recommended that 'a scheme should be formulated under which the tools should be standardised through the Indian Standards Institution and made available at competitive rates.'

**4.50. The Committee are distressed to find that while the need of introducing modern harvesting techniques and manufacturing latest logging tools within the country has been felt for a long time both by the**

Central as well as State Governments, no serious efforts were made in that direction till 1965. The Committee need hardly emphasize that the sine qua non of the successful forest management is the harvesting of forest products at the minimum cost and with the least wastage, which is possible only through conducting these operations by trained personnel, equipped with modern tools. The question of manufacturing these tools within the country itself and making them available in adequate number to the Contractors, Cooperative Societies and Corporations etc. engaged in the harvesting operations has assumed added importance in view of the training imparted at the Logging Project and deserves attention on a priority so that the trained personnel are able to put into practice effectively and fruitfully the benefits of their training. The Committee recommend that urgent steps should be taken to speed up the manufacture of latest logging tools within the country. For this purpose it is advisable that an assessment of the demand for these tools is made on a long term basis and arrangements made for the manufacture and supply of requisite quality of steel to the tool manufacturers. At the same time, effective measures should be taken to standardise the tools so as to bring down their cost of manufacture.

(ii) *Centrally-sponsored Schemes*

(1) *Plantation of Quick Growing Species Scheme*

4.51. Bamboo has been so far the principal long fibre raw material for the manufacture of pulp and paper in the country. About 80 per cent of the production is based on bamboos, while for the balance 20 per cent, mixed cellulosic raw materials like grass, straw, jute sticks, waste paper, rags etc. are utilised.

4.52. With a view to narrow down the gap between demand and supply of industrial wood, particularly for meeting the requirements of pulp and paper industry, a scheme to raise plantations of quick growing species, both indigenous and exotic such as, bamboos, eucalyptus, paper mulberry, poplars, pines, etc. was sponsored during the Third Plan. The scheme was treated as a Centrally-sponsored scheme eligible for 100 per cent subsidy from the Centre, subject to a maximum of Rs. 200/- per acre of plantation actually raised, in order to encourage the State Governments to maximise their efforts in this respect. The species have been selected on account of their fast rate of growth and their suitability for industrial use so that the increased demand of raw materials for pulp and paper industries may be met in a short period of 10 to 15 years. The scheme has been continued as such in the subsequent years also.

4.53. In a written reply, the Ministry have stated that during the Third Plan period, a provision of Rs. 281 lakhs was made for covering

an area of 56084 hectares under the scheme. As against this, an area of 85,000 hectares was planted up at a cost of Rs. 366 lakhs. During the year 1966-67 and 1967-68 an area of 103,777 hectares (47,357 ha. in 1966-67 and 56,420 ha. in 1967-68) was planted up at a cost of Rs. 537 lakhs (239 lakhs for 1966-67 and 298 lakhs for 1967-68). For 1968-69, a provision of Rs. 300 lakhs with a physical target of planting 60,000 ha. has been made.

4.54. Subsequently, the Ministry furnished the following figures relating to the financial outlay, actual expenditure physical targets and achievements made under the scheme:—

| | (Rs. lakhs) Provision | Expend. | (ha.) Target | Archivement |
|---|---|---|---|---|
| (I) Third Plan (1961—66) | 281·32 | 371·19 | 56,084 | 84,791 |
| (II) 1966-67 | 228·81 | 238·88 | 46,301 | 47,357 |
| III) 1967-68 | 292·70 | 298·24 | 59,231 | 56,420 |

4.55. The percentage figures of survival of the plantations for the years 1962-63, 1963-64 and 1964-65 are stated to be 74 per cent, 77 per cent and 81 per cent respectively. The representative of the Ministry has informed the Committee during evidence that the figures have been collected from the States who keep complete records. He has also informed the Committee that the correct percentage of survival is available only after three years and as such information for 1965-66 and onwards is not available with the Ministry.

4.56. During the Third Plan period, the amount of Central grant released to various States and Union Territories is indicated below against each:—

| State/Union Territory | (Rs.)* |
|---|---|
| Andhra Pradesh | 17,53,500 |
| Assam | 17,27,626 |
| Bihar | 16,48,719 |
| Gujarat | 12,03,000 |

*The final accounts for 1965-66 in respect of a few States have yet to be closed.

| State/Union Territory | (Rs.)* |
|---|---|
| Jammu & Kashmir | 5,38,000 |
| Kerala | 6,85,164 |
| Madhya Pradesh | 54,98,200 |
| Madras | 6,74,200 |
| Maharashtra | 41,88,600 |
| Mysore | 53,61,300 |
| Orissa | 23,10,500 |
| Punjab | 15,38,600 |
| Rajasthan | 87,200 |
| Uttar Pradesh | 73,66,800 |
| West Bengal | 14,69,800 |
| | 3,60,51,200 |
| Himachal Pradesh | 2,53,000 |
| Tripura | 2,62,000 |
| TOTAL:— | 3,65,66,200 |

4.57. It has been stated that for allotment of the funds under the scheme to the various States, the criteria followed are as under:—

(i) suitability of soils and climatic conditions for raising selected quick growing species.

(ii) location of plantations to be raised *vis-a-vis* the existing or proposed or expected pulp and paper mills.

(iii) capacity of the Forest Departments to undertake such plantations.

4.58. About the manner in which the Centre keeps a watch on the implementation of the Scheme by States and also on the proper utilisation of the Central grants, it has been stated that monthly progress reports are obtained from the States. The Technical Advisers in the Government of India also visit these areas when touring the States. The grant under the scheme is released on the basis of the actual area planted and reported to the Centre.

4.59. The representative of the Ministry has further informed the Committee during evidence that grants are released to the States on the

*The final accounts for 1965-66 in respect of a few States have yet to be closed.

basis of certified copies from the Accountant General that they have planted so much area and that they have spent so much money. In reply to a question, the representative of the Ministry has also apprised the Committee that there is no machinery with them to go and check physically the area planted or percentage of plantations survived except a few visits, which are paid not with a view to see their area or make any sample checks.

4.60. As a result of the implementation of the scheme, the following benefits are stated to have accrued to the pulp and paper industry in different States:—

(1) *Madras.*—A rayon pulp plant is being established to utilise the plantations raised in the Nilgiri District.

(2) *Kerala.*—The feasibility of setting up a Newsprint factory based on the plantations raised under the scheme, has been worked out.

(3) *Uttar Pradesh.*—The possibility of establishing a Rayon Pulp Factory is under active consideration.

(4) *West Bengal.*—The Titagarh Paper Mill and the Bengal Paper Mill have started taking available plantations grown Eucalyptus for their current production.

(5) *Mysore.*—The West Coast Paper Mill, which has already been using Eucalyptus for plantation proposes to undertake a major expansion of its capacity by further use of this type of wood.

4.61. The working group of the Committee on Natural Resources of the Planning Commission set up in December, 1964, have reviewed the performance of the scheme in the Third Plan. After considering subsequent requirements, the Working Group have recommended the continuance of the scheme as a Centrally sponsored one with an allocation of Rs. 30 crores for plantation of 4,00,000 ha. during the Fourth Plan period. They have also indicated that a similar allocation should be made for the Fifth Plan period.

4.62. In pursuance of the above recommendation, it was proposed to make a provision of Rs. 31 crores with a physical target of planting 4,13,000 ha. in the Fourth Plan. However, the Committee understand the scheme has not been accepted as a Centrally-sponsored Scheme for the Fourth Plan.

**4.63. The Committee note that the percentage survival of the plantations raised under the scheme, as reported by the States, ranges between**

**74 to 81. The Committee further note that the Central grants under the scheme are released to the States on the basis of the area planted with quick growing species and the expenditure incurred in that connection duly certified by the Accountant General. The Technical Advisers of the Centre, who visit the States, do not even undertake a physical random check as to the area reported to have been brought under these plantations. The Committee feel that in such cases, it is desirable that a physical check at least on a random basis, as to the area actually planted, is made by the Technical Officers of the Centre. Such a physical verification would not only ensure proper utilisation of the grants-in-aid given to the States but also the after-care of the plantations raised.**

**It is observed that out of 15 States and 2 Union Territories where plantations of these fast growing species have been raised, the proposals for their utilisation by the existing or proposed paper or pulp units seem to be confined only to 5 or 6 States. The Committee suggest that a survey of the plantations raised in other States should also be undertaken with a view to their profitable utilisation.**

(2) *Scheme on "Establishment of Forest Resources Survey Division."*

4.64. At the Ranchi Meeting of the Central Board of Forestry held in January, 1965, the following recommendation was made:—

> "The interim recommendations of the Sub-Committee on supply of raw materials to forest based industries were noted by the Board and the setting up of at least one Forest Resources Division in each State was recommended to be undertaken as a Plan Scheme for carrying out Resources Survey on a priority basis. Meanwhile Ministry of Food and Agriculture should have the further discussions in the matter with the Ministry of Industry."

4.65. The Committee have been informed during evidence that a Forest Resources Survey Division has been set up in each State. A scheme for the purpose was included in the Third Plan within the State Sector and continued during the years 1966-67 and 1967-68. In the Third Plan, an amount of Rs. 32 lakhs was spent and during 1966-67 and 1967-68 an expenditure of Rs. 24 lakhs was incurred.

4.66. During 1968-69, the scheme is being implemented as a Centrally-sponsored Scheme. A sum of Rs. 6.50 lakhs has been approved administratively as grant and Rs. 6.50 lakhs as loan to various State Governments for the implementation of the Scheme. Thus, the pattern of Central assistance released to States is 50 per cent grant and 50 percent loan subject to a maximum of Rs. 250 per sq. mile.

4.67. It has been stated that as the activities of Pre-investment Survey of Forest Resources are proposed to be extended to 75,000 sq. miles in the four zones in the Central Sector during the Fourth Plan on priorities at the national level, the scheme regarding the survey of forest resources in States/Union Territories will also have to continue as hitherto. Accordingly, the above scheme is being included in the Fourth Plan as a Centrally sponsored scheme with an outlay of Rs. 151.38 lakhs.* State-wise break up of the Plan period outlay as recommended by the Working Group in the Department of Agriculture, is indicated below:—

| | (Rs. in lakhs) |
|---|---|
| Andhra Pradesh | 5·00 |
| Assam | 10·00 |
| Bihar | 5·00 |
| Gujarat | 2·30 |
| Harayana | 2·00 |
| J & K | 10·00 |
| Kerala | 10·00 |
| Madhya Pradesh | 10·00 |
| Madras | 10·00 |
| Maharashtra | 15·00 |
| Mysore | 15·00 |
| Orissa | 15·00 |
| Punjab | 3·00 |
| Rajasthan | 6·58 |
| Uttar Pradesh | 20·000 |
| West Bengal | 12·50 |
| TOTAL :— | 151·38* |

**4.68. The Committee are happy to note that survey of forest resources in the States has been undertaken. They hope that quick steps would be taken to complete the survey as early as possible, as this would go a long way for the development of forest industries in the country. They further hope that necessary coordination between the study undertaken at the National level and at the States level would be ensured so as to obviate duplications of efforts.**

**From the allocations recommended by the Working Group for various States for the Fourth Plan, the Committee find that no provision has been**

*At the time of factual verification, the Ministry of Food, Agriculture, Community Development and Cooperation (Department of Agriculture) furnished following further information relating to the proposed allocation, of Central assistance for implementing the Scheme of Survey of Forest Resources, to the undermentioned Territories in the Fourth Plan period:—

| | | |
|---|---|---|
| Andaman & Nicobar Island | — | 2.00 Lakhs. |
| Himachal Pradesh | — | 5.00 Lakhs. |
| NEFA | — | 2.00 Lakhs. |
| Tripura | — | 3.80 Lakhs. |

**made for the State of Nagaland and the Union Territories, particularly, Andaman and Nicobar Islands and Himachal Pradesh which have rich forest resources. The Committee are unable to understand the reasons for their exclusion and feel that the scheme should be extended to those territories also.**

### (iii) *State Schemes*

4.69. The main schemes of forest development undertaken during the First, Second and Third Plan periods and in subsequent years in the State Sector relate to Economic Plantations for Industrial and Commercial Uses, Rehabilitation of Degraded Forests and Communications. The scheme of Farm Forestry-*cum*-Fuel wood Plantations was also initiated as a State Scheme in the Third Plan, and continued to be so in 1966-67, 1967-68 and current year 1968-69.

### (1) *Scheme of Economic Plantations of Industrial and Commercial Uses*

4.70. In order to meet the increasing requirement of industrial wood, the scheme regarding raising of plantations of economic species like teak, matchwood, willow, casaurina, etc. was initiated in the First Plan and continued since then. It has been stated by the Ministry that figures regarding financial outlay and physical target for the First and Second Five Year Plan are not available. However, as regarded the actual performance of the scheme, it has been stated that these plantations have been raised on 50,033 hectares at a cost of Rs. 136.58 lakhs in the First Plan and on 215.781 hectares at a cost of Rs. 703.98 lakhs in the Second Plan. The progress of the scheme in the Third Plan and 1966-68 is as under:—

| | (Rs. in lakhs) | | (hs.) | |
|---|---|---|---|---|
| | Provision | Expenditure | Target | Ahieve-ment |
| (i) Third Plan . | 979·52 | 1113·66 | 237,057 | 2,38,267 |
| (ii) 1966-67 . | 316·29 | 314·34 | 57,680 | 59,336 |
| (iii) 1967-68 . | 325·76 | 365·20 | 54,476 | 48,759 |

4.71. In the Fourth Plan, it is proposed to plant an area of 4,00,000 hectares at a cost of Rs. 25,42 lakhs under this scheme.

**4.72. The Committee are happy at the work done and progress achieved in raising economic plantations of industrial and commercial value by the States. They hope that sustained efforts would continue to be made to raise these plantations in order to meet the perspective requirements of Industrial wood for wood-based industries**

(2) *Scheme of Rehabilitation of Degraded Forests*

4.73. Consequent on abolition of Zamindari and integration of erstwhile Princely States, a large forest area which had been over-exploited during the two wars and thereafter, was brought under State ownership. These forest areas required concerted efforts to rehabilitate them by suitable techniques. In the First Plan an area of 13,26,295 hectares was rehabilitated with an expenditure of Rs. 180.63 lakhs. In the Second Plan an area of 4,10,525 hectares was rehabilitated with an expenditure of Rs. 154.49 lakhs. The provision made and the expenditure incurred and the achievements made under this scheme during the Third Plan and the two subsequent years are given below:—

| | (Rs. in lakhs) | | (hectares ) | |
|---|---|---|---|---|
| | Provision | Expenditure. | Target | Achievement |
| Third Plan | 298·18 | 299·42 | 2,10,232 | 2,18,121 |
| 1966-67 . | 49·87 | 47·20 | 20,110 | 18,688 |
| 1967-68 . . . | 56·30 | 47·11 | 22,019 | 21,243 |

**4.74. In the Fourth Plan, it is proposed to rehabilitate 2,50,000 hectares at a cost of Rs. 7,11 lakhs.**

**4.75. In a written reply, the Ministry have stated that 25.2 million hectares of the forest area falls under the category of medium to poor stocked, 2.7 million hectares are very poorly stocked and about 20 million hectares, the stocking is variable because of their location in hilly and mountainous tracts.**

**4.76. The Committee are glad to note that continuous progress is being made under the scheme to rehabilitate degraded forests in the country. They realise that the forest areas to be covered under this scheme are very vast. They hope that sustained efforts will continue to be made to rehabilitate and afforest the remaining areas according to a phased programme.**

### (5) *Improvement of Communications*

4.77. It has been stated that during the First and Second Five Year Plan period, improvements of forest communications, *viz.* construction of new road and improvement of existing roads were undertaken over a length of 6758 kms. and 16,356 kms. at a cost of Rs. 42.27 and Rs. 247.65 lakhs respectively. The progress made in this regard during the Third Plan and 1966-67 and 1967-68 is as follows:—

| | (Rs. in lakhs) | | (in kms.) | |
|---|---|---|---|---|
| | Provision | Expenditure | Target | Achievement |
| (i) Third Plan | 482·52 | 554·93 | 17,768 | 17,262 |
| (ii) 1966-67 | 120·13 | 132·52 | 2,180 | 2,157 |
| (iii) 1967-68 | 100·90 | 125·55 | 1,273 | 1,273 |

4.78. For Third Plan and 1966-67, no Central assistance has been provided to the States for the development of communications. For 1967-68 and 1968-69 the pattern of Central assistance is to provide on lump sum basis 20 per cent grant and 30 per cent loan of the ceiling approved annually for State Forestry Schemes.

4.79. According to the "Timber Trends and Prospects in India 1960—75", 12.9 million hectares of forests are considered as productive but inaccessible. Much of this area is unexploited because of the lack of communications. In addition, large areas now classified as accessible and brought under regular working are stated to be inadequately served with communications, for instance, parts of Madhya Pradesh, Assam, Orissa, hilly tracts of Uttar Pradesh, N.E.F.A. etc.

4.80. In advanced countries, for every sq. kilometre of forest area approximately 2 km of road on an average is considered necessary.

4.81. In this connection, the Sub-Working Group constituted in April, 1968, to formulate Fourth Plan proposals in respect of forestry development schemes, has stated:—

> 'With the present low productivity of our forests, it would be justifiable to have an average of 1 km. of road for every sq. km. of forest area by the end of the Fifth Plan. This is equivalent to a road system in which every part of the forest is at an average distance not exceeding 2.5 km. from a road.

Based on the above considerations, about 60,000 km. of roads are required to be constructed. . . ."

4.82. In the Draft outline of Fourth Plan, it has been stated, "Quite a large area under forest is at present inadequately served with communications, with the result that the out-turn of the produce is reduced and the cost of extraction become expensive. If all these areas are opened up with a good road system capable of use throughout the year, it would be possible to increase the output. It has therefore, been proposed that the existing roads should be properly maintained and a phased programme spread over 10 years for construction of new roads, should be formulated. This scheme would have considerable developmental potential, particularly among the tribal people, since a large part of the programme would be in tribal areas."

4.83. Asked whether any scheme as envisaged in the Draft Outline of Fourth Plan has been formulated, the Ministry have informed the Committee that schemes relating to development of forest communications with an outlay of Rs. 1162 lakhs during the Fourth Plan have been proposed by the States/Union Territories. The Working Group which recently discussed Fourth Plan proposals have recommended an outlay of Rs. 1107 lakhs for this programme.

**4.84. The Committee note that large forest areas particularly some of the rich forests at the higher elevations in the Himalayas and other mountainous regions, remain still unexploited or partly exploited on account of inaccessibility of those regions. It is well known that lack of communication facilities results in reduced forest produce and increased cost of extraction. If all these areas are opened up with a good communication system capable of being used throughout the year, it would be possible to increase forest produce considerably and manage the forests efficiently. The Committee would, therefore, strongly recommend that special efforts should be made to accelerate the programme of improvement of communications to link up forest areas.**

(4) *Farm forestry-cum-Fuelwood Plantations Scheme* . .

4.85. In order to meet the shortage of fuelwood in the country, a scheme of farm forestry was included in the Third Five Year Plan at a cost of Rs. 363 lakhs in the State Sector. It was proposed to raise fuelwood trees in village commons, boundaries of the fields, along river and canal banks and road-sides and also other available areas with active

cooperation of the villagers. In this connection, the Third Five Year Plan stated:—

> "The importance of village and fuel plantations and of extension forestry has been frequently stressed, but the practical results gained thus far are small. Panchayat Samitis and Panchayats should be assisted to take up these programmes on a large scale, and the Forest Departments should ensure that seeds and saplings are available in each area. There is considerable scope for community efforts in planting trees on village common lands, along village roads, contour bunds and irrigation tanks. Individual cultivators should also be assisted in growing trees. It is estimated that an area of over 1.2 million acres will come under farm forestry during the Third Plan. Programmes for planting trees along national and State highways, canal banks and railway tracks should be intensified. Efforts in these directions can add substantially to the supply of firewood and of wood for tools and implements."

**4.86. The scheme as included in the Third Plan was eligible for 50 per cent grant at the rate of Rs. 25 per acre to be shared equally between the Central and State Governments. The same pattern of Central assistance continued during the years 1966-67 and 1967-68.**

**4.87. During the current year, 1968-69, the scheme has continued to be in the State Sector but with the difference that it has been treated as a scheme with earmarked assistance. The partern of assistance during 1968-69 is as under:—**

| | |
|---|---|
| Extension—Forestry . | 50% subsidy on the basic of actual expenditure, subject to a maximum of Rs. 500 per ha. |
| Village Plantations . | . 100% subsidy, subject to a ceiling of Rs. 200 per ha. |

**4.88. A total amount of Rs. 40 lakhs has been approved administratively for the various States for the implementation of the scheme during** 1968-69.

**4.89. It has been stated that for the Fourth Plan the scheme has been accepted as a State** Scheme **although the working Group on** Forestry had recommended that the scheme should be operated as a Centrally-sponsored Scheme. The pattern of assistance for Fourth Plan

has not been fixed for each scheme separately. Instead a lumpsum assistance for the State forestry schemes together, would be made available to the States.

4.90. The financial provision and the actual expenditure incurred on the Scheme during the Third Five Year Plan period and during the years 1966-67 and 1967-68 are given below:—

(Rs. in lakhs)

| | Provision | Expenditure | Shortfall |
|---|---|---|---|
| (i) Third Plan | 363·08 | 206·94 | —156·14 |
| (ii) 1966-67 | 76·43 | 67·51 | —8·92 |
| (iii) 1967-68 | 80·42 | 86·30 | +5·88 |

As against the physical targets, the following achievements were made under the Scheme:—

(hectares/kms.)

| | Target | Achievements | | Shortfall |
|---|---|---|---|---|
| (i) Third Plan | 260,312 | 86,153 | — | 174,159 |
| (ii) 1966-67. | 23,333 + 352 (Row kms.) | 22,647 + 352 (Row kms.) | — | 686 |
| (iii) 1967-68 | 10,139 + 1316 (Row kms.) | 9,882 + 1316 (Row kms.) | — | 257 |

**4.91. According to the Ministry, the main reasons for the poor performance of the scheme during the Third Plan were inadequate funds** provided by the States and the lack of enthusiasm for the Scheme on account of the low rate of subsidy.

4.92. Recently, the Committee set up by the Planning Commission to study the scope and possibilities of intensifying compost programme in the country, have also in their report adversely commented upon the poor performance of the above scheme.

4.93. In regard to the imperative need to augment the fuelwood resources, the following observations of the Energy Survey of India Committee (1965) are very much relevant:—

> "We fear that if there are no immediate steps taken, shortage of firewood will cause grave hardship and lead to much larger demands for kerosene than Indian potential imports are likely to be able to provide. We recommend that immediate and active measures be taken jointly by the Government of India and the State Governments to formulate and implement a policy for expanding the growth of quick-growing timber suitable for use as firewood."

4.94. During the evidence, when the attention of the representative of the Ministry was drawn to the observations of the Stevenson Committee of the Planning Commission about the Scheme, he stated that Rs. 25 (subsidy) was not sufficient for anyone to take it up and make much headway. In reply to a question as to on what basis the amount of Rs. 25 per acre was fixed, the representative of the Ministry added that that was not the recommendations of the Ministry and that he had been trying to find out for the last 5 years how this happened. The Deputy Commissioner (Soil Conservation) in the Ministry, further added:—

> "I think the idea came from the idea of subsidies.....for agricultural schemes, there is some incentive which is given either in the form of subsidies or in the form of loans. It was at that time perhaps thought that the entire cost would not have to be met but that the owners of the lands would contribute their own labour and that the amount of Rs. 25 would cover the cost of plants and that kind of thing. But it did not work."

4.95. The Committee are unhappy at the slow progress of the Scheme of Farm Forestry-cum-Fuel Wood Plantations. They note that low rate of subsidy, absence of a well-defined agency to implement the Scheme and non-earmarking of suitable areas for raising plantations under this Scheme, were the main reasons for this. The Committee are constrained to observe that even though the poor progress of the Scheme had been brought to the notice of Government during the currency of the Third Plan itself and the reasons therefor were also identified, no serious at-

tempt was made to accelerate the progress of the Scheme by removing the deficiencies.

4.96. The importance of farm forestry to the rural economy of the country cannot be over-emphasised. Farm forestry is necessary to provide firewood to the villagers so as to release cow-dung for manure as well as to yield small timber for agricultural implements. The Committee consider that the success of this Scheme lies mainly in invoking the willing cooperation of the villagers through proper publicity and by providing necessary technical guidance and help to them by the Forest and other Departments. In this connection the Committee would also like to reiterate the recommendation of the Energy Survey Committee of India that "immediate and active measures should be taken jointly by the Government of India and State Governments to formulate and implement the policy for expanding the growth of quick growing timber suitable for use as firewood."

The Committee hope that necessary steps would be taken by the Government to make a success of this Scheme during Fourth Plan period.

C. Reclamation of Ravines

4.97. Large areas of land along rivers such as the Yamuna, the Chambal and the Mahi and their tributaries have been badly eroded and converted into ravines. The march of ravines is progressing unabated, resulting in loss of productive lands. About 3.5 million acres in Uttar Pradesh and about 8,00,000 acres each in Madhya Pradesh, Rajasthan and Gujarat are badly affected by raving erosion.

4.98. The Committee have been informed that the total area of ravines is about 19-70 lakh hectares, mostly in Madhya Pradesh, Uttar Pradesh, Rajasthan and Gujarat. In addition to these four States, there are other States and Union Territories also (19 combined together) where there are gullied lands which may be categorised technically as ravines.

4.99. The area covered by ravines in each of the said four States is as under:—

| | | (in lakh hectares) |
|---|---|---|
| 1. | Uttar Pradesh | 1·23 |
| 2. | Madhya Pradesh | 2·43 |
| 3. | Rajashtan | 3·24 |
| 4. | Gujarat | 4·00 |
| | | 10 90 |

4.100. The rate of ravine formation is stated to be very rapid, for instance, over 1,000 hectares of land are annually formed into ravines in Madhya Pradesh. Work at research Centres has emphasized the importance for the reclamation of the ravine lands by the adoption of controlled grazing, afforestation, terracing and other soil conservation measures in the catchment areas. Surveys to determine the severity of the problem in various areas and the action to be taken are, however, an essential preliminary.

4.101. For the reclamation of ravines, a small beginning was made during the Second Plan and pilot projects were set up in Madhya Pradesh and Gujarat. During evidence, the Committee have been informed that upto the Second Plan, 32526 acres of ravine lands were planted. The total area planted so far is stated to be 1,71,083 acres. State-wise break up of the ravine area afforested is as given below:—

| | | |
|---|---|---|
| 1. Uttar Pradesh | 34,100 | ha. |
| 2. Madhya Pradesh | 2,200 | ha. |
| 3. Rajasthan | 2,800 | ha. |
| 4. Gujarat | 17.600 | ha. |
| | 56,700 | ha. |

4.102. Asked about the Central assistance given to the States for the purpose, the representative of the Ministry stated during evidence that during the Second Plan, the pattern for afforestation schemes under the Soil Conservation measures was upto 50 per cent of the cost incurred by the States subject to the over-all ceiling that the State was entitled to. In the Third Plan also the pattern was 50 per cent. Originally, the grant was 25 per cent (to be shared equally between the States and Centre and 75 per cent loan), but when the States represented their difficulties about the execution of ravine schemes, this was increased upto 50 per cent. In the middle of the Third Plan, the pattern of assistance was rationalised for all Soil Conservation Scheme uniformally at the rate of 15 per cent grant and 60 per cent loan within the limit of overall assistance to States.

4.103. The amount spent on ravines reclamation on different types of lands from the First Plan upto the end of 1967-68 is about Rs. 2.62 crores.

4.104. Outside the plan ceiling a sum of Rs. 9.30 lakhs was given during the Third Plan for survey of ravine lands. A Centrally-sponsored Scheme of Ravine Survey was drawn up on the basis of 100 per cent Central Grants and an area of 6.16 lakh hectares was surveyed by

ground survey methods and aerial photography. Further area of 1.44 lakhs hectares was surveyed during the years 1966-67 and 1967-68. States have also been helped to collect aerial photographs to identify the ravines. Special arrangements have been made for training people in aerial photography at the Indian Photo Inter-pretation Institute.

4.105. In written reply to a question the Ministry have informed that the total area of the ravine and the adjoining land effected by erosion which needs to be surveyed in the country would run into several million hectares. During the Third Plan period, and 1966–68, a total area of 7.60 lakh hectares has been surveyed. For the Fourth Plan, it is intended to cover most of the ravine areas by reconnaissance survey based on aerial photo-interpretation techniques. While general reconnaisance will yield information on ravine extent and general classification, detailed surveys are intended to be taken up only in relation to areas which are likely to be taken up under various schemes for Ravine Reclamation for agriculture or afforestation.

4.106. Asked about the reasons for the slow progress of reclamation work, the representative of the Ministry stated that it was due to delay in transfer of revenue lands due to lack of detailed and upto date records and difficulties in finding resources for this scheme as there were other competing priority schemes on agriculture etc. The representative of the Ministry further stated that one of the difficulties in making an overall plan for ravines was that the exact area and its classification according to different depths was not known and that a proper scheme could be drawn up in accordance with the technical requirements only after such a survey.

4.107. Recently, in February, 1967, Government of India have constituted a Central Ravine Reclamation Board to ensure ravine control on proper lines and a more rapid development of the areas. The Board consists of one representative each from the States of Uttar Pradesh, Madhya Pradesh, Rajasthan and Gujarat, Inspector General of Forests, one representative each from the Union Ministries of Finance and Irrigation and Power and Planning Commission and others. Secretary to the Department of Agriculture is the Chairman of the Board. The Board is to meet at least once in a year. The functions of the Board are:—

(i) to advise on the formation of national policies and objectives on ravine lands in order to ensure that such areas receive the attention they deserve.

(ii) to keep under constant review the preparation of plans.. and programmes for carrying out the implementation of the agreed policy of ravine control and reclamation.

(iii) to keep under review the execution of these schemes through the various agencies of the State and Central Governments.

(iv) to assist in close inter-State coordination and remove administrative bottlenecks hindering the progress of the schemes.

(v) to arrange for collection of basic data and training of personnel required for the execution of the schemes.

(vi) to review the progress of the schemes.

4.108. It has been stated that the problem of reclamation of ravines including afforestation has been considered in detail by the Central Ravine Reclamation Board and a policy document has been approved by it. Ravine control and reclamation operations include structural erosion control works, reclamation for agriculture of shallow ravines and afforestation of the deeper portions of the ravine system. The Board has stressed that all these measures should be planned together for a ravine system within a particular watershed in order to ensure rational land use for agriculture as well as forests.

4.109. In the first meeting of the Central Ravine Reclamation Board held last year, it has been decided that a sub-Committee of the Board may be formed to look into the problem of private lands and *Gaon Samaj* lands in the Ravines, the system of land procurement and allotment, the norms of costs and other ravine problems for the States of Madhya Pradesh and Rajasthan. The Committee may also prepare pilot projects covering an area of 4,000 hectares each.

4.110. Accordingly, two sub-committees one for Rajasthan and one for Madhya Pradesh have been constituted and pilot projects for ravine survey and reclamation are being prepared. Areas for the project have been selected near Kota for Rajasthan and in districts of Bhind and Morena in Madhya Pradesh .

4.111. The ravine problem has also been considered by the Sub-Committee constituted by the Central Board of Forestry. The recommendations of the Committee *inter alia* are:—

(1) In order to arrest the menace of erosion and expansion of ravine lands and their further degredation, it is strongly recommended that a reasonably short time limit of 15 years be fixed for completing rehabilitation programmes covering all the ravine areas and that comprehensive Perspective Plans be drawn up by the concerned States to treat the entire ravine lands within the stipulated period.

(2) Necessity of rehabilitation of ravine lands on watershed basis irrespective of the fact whether they belong to the Revenue Department, Forest Department, Panchayat or private holders is recognised, and it is recommended that such lands should be managed by the Forest Department in perpetuity to ensure protection and lasting productivity therefrom.

(3) In order to protect ravine lands from adverse biotic influences namely: illicit grazing, illicit hacking etc. it is recommended that voluntary cooperation, goodwill and active interest of the local population be enlisted to the maximum possible extent by properly organizing educative programmes, demonstrations etc. to highlight the benefits and advantages accruing to the people with the adoption of scientific treatment to ravine lands.

**4.112. The Committeee are constrained to observe that the progress made in the reclamation of ravines in the country has been far from satisfactory. Out of a total area of about 20 lakh hectares covered by ravines, the area afforested so far is about 56,700 hectares. The existence of ravine lands has not only created law and order problem in some of the States but has also affected the economic growth and agricultural production of those areas. The Committee regret that in the past reclamation of these areas has not received adequate attention. Thye are, however, glad to note that a Central Ravine Reclamation Board has now been constituted for ravine control and reclamation. They hope that the Board will now undertake this work in right earnest and will ensure a proper check on the further growth of ravines and the rapid development of these areas.**

### D. Afforestation in Catchment Areas of River Valley Projects

4.113. During the last two decades, India has developed a very large water potential, particularly to attain agricultural self-sufficiency. Accordingly, over 1,85,000 million Cu.m. of water has been stored by initiating 500 major and medium schemes, of which nearly 300 were completed during the first three development Plans. The total catchment area of the projects completed or nearing completion is more than 0.777 million Sq. Km. (77.00 million hectares). Evidence of a fast rate of siltation led to the taking up of a special programme for soil conservation measures including afforestation in the catchments of 13 selected river valley projects, namely, Bhakra, Maohkund, Hirakund, Chambal, Mayurakashi, Kundah, Pohru, Tunglebadra, Ramganga, Dantiwada, Kangasabsti, Ghod and Damodar Valley Corporation. The total catchment area in these Projects is stated to be 20,72,000 sq. Km. spread over in different States and neighbouring countries.

4.111. Out of the above total catchment, an area of 4,268 Sy. Kms. has been afforested. The figures regarding the area covered during the three Plan periods and thereafter under these Centrally-sponsored project and the expenditure incurred thereon, are indicated as under:—

| | Expenditure incurred (in Rs. lakhs) | Area covered by soil conservation measures (in sq. miles) |
|---|---|---|
| 1st Plan | 45·86 | 53 |
| 2nd Plan | 207·18 | 330 |
| 3rd Plan | 1140·40 | 1265 |
| 1966-67 | 301·58 | 302 |
| 1967-68 | 312·83 | 270 |
| 1968-69 (anticipated) | 312·00 | 240 |

4.115. The total financial outlay proposed for the Fourth Plan is Rs. 36.12 crores for the treatment of 7.57 lakhs hectares with various measures including afforestation, bunding etc. The scheme is proposed to be continued as a cent per cent Centrally-sponsored scheme.

4.116. In reply to a question the representative of the Ministry of Irrigation and Power has stated during evidence that the execution of these evidence that the execution of these schemes is undertaken by the concerned State Governments. He has further stated that with a view to maintain coordination and to take stock of progress there are regional Standing Committees with Inspector General of Forests as Chairman, the Chief Engineer (Flood Control) of the Union Ministry of Irrigation and Power and the Director in charge of Soil Conservation in Central Water and Power Commission as Members.

4.117. The Committee consider that the absence of adequate permanent vegetative cover to protect the water sheds would result in excessive silt deposit which would adversely affect the costly dams. The Committee, therefore, recommend that various aspects relating to erosion and sedimentation of catchments should be studied and timely protective measures taken.

### E. Productivity

4.118. Out of the total forest area of 75.3 million hectares in the country, conifers which in European countries constitute the main source

of industrial timber, occupy only 4.6 million or about 6 per cent of the total forest area. A large proportion of this area is inaccessible and hence uneconomic for exploitation. Board-leaved forests which occupy 70.7 million hectares are composed of a very large number of species a few of which are at present valuable. Among the more important of these species are Teak, Sal, Laurel, Gurjan, Rosewood, Haldu, Pali, Benteak Aini, etc.

4.119. It has been stated that the mean annual increment in the exploited forests of the country is 0.74 cu. m./ha./year for the coniferous forests and 0.53 $m^3$ for broad-leaved forests. The overall mean annual increment for the exploited forests of the whole country is 0.53 cu.m/ha./year.

4.120. As compared to other countries, the growing stock and increment in India is as shown in the following table:—

| | Growing stocks cubic meter per hectare | Growing stocks *per capita* in cubic meters | Meen annual increment cubic meter per hectare |
|---|---|---|---|
| 1. India | 28 | 5 | 0·53 |
| 2. Asia | 90 | 15 | 2·60 |
| 3. Japan | 64 | 8 | 2·50 |
| 4. Europe | 80 | 26 | 2·50 |
| 5. U.K. | 89 | 2 | 3·50 |
| 6. U.S.S.R. | 152 | 326 | 1·90 |
| 7. North America | 102 | 188 | 2·30 |
| 8. U.S.A.. | 91 | 100 | 3·00 |
| 9. World | 110 | 57 | 2·00 |

4.121. The Committee have been informed during evidence as well as in a written note that the reason for low productivity is that considerable area classified as forests is poorly stocked. Further a large proportion of hill and mountain forests and catchment areas are required to be preserved and protected only for their major functional role in the prevention of soil erosion, run off and mitigation of floods. The annual yield of timber is mainly derived from merchantable forest area which is about 59 million hectares, i.e. about 80 per cent of the total forest area of the

country. Out of this area, all the forests are not equi-productive or uniformally stocked being located in widely varying climatic and soil conditions, thereby resulting in wide variations in their productivity and yield. Productivity also depends on other factors like (i) the species and the type of forests crop-natural or artificial, (ii) type of management for which the forest crops are principally managed, (iii) biotic factors such as incidence of grazing, other animal damage and fire, (iv) incomplete extraction of all the material felled in the forests due to inadequate facilities and means, and (v) burden of individual rights and privileges affecting the overall production.

4.122. The Committee have further been informed that in India, yield of timber per acre in a well-stocked forest compares very favourably with other countries. Calculated on the basis of full stocked stands the maximum mean, annual productivity for stem timber for different forests (natural crops) of the country is as follows:—

| | |
|---|---|
| i. Sal Forests | 6.2 $m^3$/ha/yr. or 1.8 tons/acre/yr. (Qlty.I)<br>2.2$m^3$/ha/yr. or 0.63 tons/acre/yr. (Qlty.III). |
| ii. Teak forests | 7$m^3$/ha/yr. or 2.00 tons/acre/yr.(Q'ty.I)<br>0.6$m^3$/ha/yr. or 0.17 tons/acre/yr.(Qlty.IV) |
| iii. Chir forests | 9$m^3$/ha/yr. or 2.6 tons/acre/yr.(Qlty.I).<br>4$m^3$/ha/yr. or 1.2 tons/acre/yr.(Qlty.III). |
| iv. Deodar forests | 11$m^3$/ha/yr. or 3.1 tons/acre/yr.(Qlty.I)<br>2.5$m^3$/ha/yr. or 0.7 tons/acre/yr.(Qlty.IV). |

4.123. Thus, while in India the yield of Chir pines and Deodar are 9 and 11 $m^3$/ha/year (2.6 and 3.11 tons/acre/year) respectively, the timber yield of Scotch pine in England is only 7$m^3$/ha/year (2 tons/acres/year). If total productivity including both stem timber and small wood is taken into consideration, the figures are as shown below:—

| | |
|---|---|
| i. Sal forests | 12.0$m^3$/ha/yr. or 3.43 tons/acre/yr.(Qlty.I)<br>5.4 $m^3$/ha/yr. or 1.54 tons/acre/yr.(Qlty.III) |
| ii. Teak forests | 12.2 $m^3$/ha/yr. or 3.49 tons/acre/yr.(Qlty.I)<br>2.8 $m^3$/ha/yr. or 0.8 tons/acre/yr. (Qlty.IV). |
| iii. Chir forests | 15.4 $m^3$/ha/yr. or 4.4 tons/acre/yr. (Qlty.I).<br>6.3$m^3$/ha/yr. or 1.8 tons/acre/yr. (Qlty.III). |
| iv. Deodar Forests | 14.0$m^3$/ha/yr. or 4.0 tons/acre/yr. (Q'ty.I).<br>4.9 $m^3$/ha/yr. or 1.4 tons/acre/yr. (Qlty.IV). |

4.124. As against the aforesaid productivity of Chir and Deodar in India, the corresponding figure for Scotch pine in U.K. is 11$m^3$/ha/year and for loblolly pine in U.S.A. is 13$m^3$/ha/year.

4.125. Asked about the proportion of well-stocked, poorly stocked and non-stocked forest area in the country, the Ministry in a written note have stated as follows:—

"The total forest area of the country is about 75 million hectares. Of this area about 17.3 million hectares have a good stocking (density 1.00—0.70), 25.2 million hectares are medium to poor stocked (density 0.69—0.10) and 2.7 million hectares are very poorly stocked (density less than 0.10). Bamboos constitute an area of 10.0 million hectares while the stocking of about 20 million hectares is variable because of their location in hilly and mountainous tracts. This is mostly managed as protection reserves in which exploitation is restricted to removal of deed and dying trees only."

4.126. During evidence the representative of the Ministry has stated:—

"Now we propose to carry out a survey of those areas which have not been stocked for various reasons, for want of funds and so on. Some area cannot be stocked because of the rocky nature or the arid conditions that are prevailing; we are going to carry out a rough reconnaissance survey to find out where these areas lie and how they can be utilised."

4.127. In written reply to a question as to whether any plan has been drawn up to carry out the survey as envisaged above, the Committee have been informed that the State and Union Territory Forest Departments are being requested to carry out a rough reconnaissance survey and after receipt of necessary information from them, programme for development of the areas would be considered.

4.128. With a view to raise the forest productivity average in the country, following steps have been taken:—

(1) Adoption of better and more intensive management techniques and tending operations.

(2) Augmentation of production from forests by:

(i) Complete extraction of all materials felled by use of modern logging techniques and equipment.

(ii) Complete extraction of all materials felled by use of modern whether primary or secondary in various sizes, by the adoption of latest wood working, wood seasoning, wood preservation and timber engineering techniques.

(iii) Raising plantations of quick growing species, like *Eucalyptus, tropical* pines, poplars, etc. etc.

(iv) Raising of plantations of economic species.

(v) Rehabilitation of degraded forests.

(vi) Afforestation of waste lands like ravines, denuded hill slopes, etc. etc.

(vii) Raising of village woodlots, road side and canal bank plantations, wind breaks and shelterbelts.

4.129. The Committee regret to note that the productivity of Indian forests is a little over 0.5 cubic metres per hectare as against the world average of 2.00 cubic metre per hectare and the European average 2.50 cubic metre per hectare. They note that the potential productivity of Indian forests is estimated to be 5.00 cubic metre per hectare i.e. ten times of the present productivity. The main reasons for low productivity is stated to be the existence of large forest areas which are poorly or very poorly stocked. The Committee are surprised that so far no survey of the forest areas, which have not been stocked at all, has been made. The Committee need hardly emphasise that determined efforts are required to be made to increase the productivity of the forests. The need for increasing productivity is all the more greater as the requirements of industrial and other woods in the country are increasing at a much faster rate than their availability. The Committee recommend that efforts should be intensified to re-stock the existing forest areas which are poorly stocked or not stocked at all and to reclaim deforested areas so as to increase the productivity of forests in the country.

## F. Evaluation

4.130. Various schemes for the development of forests have been undertaken both by the Centre as well as States during the First, Second and Third Plan periods and during the Post-Third Plan period. An amount of more than Rs. 100 crores is stated to have been spent on these schemes in the Central and the State Sector. During the Fourth Plan an outlay of Rs. 144,84.00 lakhs is proposed.

4.131. A well-known specialist in forestry has pointed out to the Committee that "so far no attempt has been made to find out to what extent funds spent on the rehabilitation of depleted forests or on creating plantations of fast growing valuable woods of commercial or industrial importance has produced tangible results. In several cases where money was given as a subsidy adequate care was not exercised to see that the funds were usefully employed, for instance plantations of the valuable species, teak, created in the First and the Second Five Year Plans in the erstwhile Vindhya Pradesh have practically all disappeared. In long term ventures like forestry it is absolutely necessary to have an agency

to assess from time to time the progress made." He has further suggested that "provision be made to create a team of experts who should visit representative areas in States and give their considered opinion and suggestions to ensure that the forests would develop satisfactorily."

4.132. In written reply to a question, the Ministry have stated that quarterly progress reports are obtained from the Forest Departments of States|Union Territories in respect of physical and financial achievements. They have further stated that every State has technically trained personnel who can undertake evaluation work. Some of the State Governments have already created cells to evaluate the performance of various plantations. During evidence, the representative of the Ministry has stated that the evaluation of work is also being insisted upon by the respective Accountant Generals in the States.

4.133. The Committee have been informed that there is no organisation at the Centre to undertake such an evaluation work.

4.134. Asked whether it is considered necessary that the Centre should constitute on permanent or on *ad hoc* basis a body of experts to assess or evaluate from time to time the real progress made on various development schemes undertaken by the Centre or the State Governments, the Ministry have stated that it would be of advantage to undertake evaluation of progress made under forestry schemes at the Central level by a body of experts.

4.135. During evidence when the question of keeping watch on the proper utilisation of Central assistance to the States was being discussed the representative of the Ministry agreed with a suggestion that there should be a machinery to check up its utilisation by the States.

4.136. It is noticed from the minutes of the Fifth Meeting of the Central Board of Forestry held at Panchmarhi in May, 1959, that the importance of providing a Central machinery for the assessment and evaluation of all plantations and afforestation work undertaken by the States from time to time, the results obtained etc. was felt by the representatives of various States who attended the meeting. The board adopted the following resolution:—

> "On a general desire expressed by the State Governments the Government of India be invited to consider the appointment of a body consisting of technical and non-technical persons for making an assessment and evaluation of forest development activities in the various States and for rendering necessary advice for improvements."

**4.137. The Committee need hardly overemphasize the importance of periodical evaluation of developmental schemes, particularly in a long**

term venture like forestry which involves large scale and long-term investment and requires constant after-care. They, therefore, suggest that the Central Government in consultation with State Governments should explore the feasibility of constituting an ad hoc team consisting of eminent experts to evaluate the progress made under various forest developemnt schemes all over the country and make suggestions for improvement. The team should visit the representative areas under different plantations in the States|Union Territories for physical assessment with a pre-planned programme and submit their report within a stipulated time. The Committee have no doubt that such an evaluation would not only help the State Forest Departments in improving their efficiency but would also ensure that public funds are utilized properly.

## G. Forest Statistics

4.138. It has been stated that the Director of Economics and Statistics, Ministry of Food, Agriculture, Community Development and Cooperation is the agency for compilation of Forest Statistics. The Directorate publishes the statistics on area, outturn, revenue and expenditure, etc. in the publication entitled "Indian Forest Statistics." The Directorate also publishes annually the statistics on forest area in the publications entitled "Indian Agriculture Statistics" and "Indian agriculture in brief." The data on outturn are collected from State Forest Departments.

4.139. In reply to a question, the Committee have been informed that the statistics with respect to major forest based industries such as Paper and Paper boards, Newsprint, Pulp, Plywood, Hardwood and Particle Board, are available with the Directorate General of Technical Development.

4.140. It is stated that statistics relating to forest area in the hilly regions and plains, village and tree forests etc. are not available with the Ministry but are being collected from the State Forest Departments.

4.141. The Committee understand that a proposal for issuing a handy compilation on Forest statistics was considered at the Fifth Meeting of the Standing Committee of the Central Board of Forestry held at Mussoorie in September, 1958. The recommendation made at the meeting was:—

> "The Committee accepts in principle the necessity for a handy compilation of the Forest statistics of India. The Committee requests the Inspector General of Forests to progress this work with the help of a small Committee of not more than five forest officers."

It appears that nothing concrete could be achieved in pursuance of the above recommendation.

4.142. In 1965, when the Central Forestry Commission was set up, it became one of the functions of the Commission to collect, standardise and publish statistics relating to forestry. The Commission has prepared draft proforma for forest statistics on the basis of requirements of Food and Agriculture Organisation and other organisations and has circulated the same to the State Forest Departments for comments.

4.143. During evidence, the Committee enquired what steps had been taken to ensure accuracy in the matter of collection and publication of forest statistics. The Committee also confronted the representative of the Ministry with the different figures relating to area under forests as published by one and the same agency, viz. Directorate of Economics and Statistics. The representative of the Ministry stated that with the concurrence of the Directorate of Economic statistics, a separate Statistical Cell had already been set up in the Forestry Wing two years back.

4.144. In reply to a question whether the Ministry were thinking of devising a format for the collection of statistics making the various principles enunciated in the National Forest Policy Resolution as their basis so that figures relating to forest area in the hills and plains, etc. could be made available, the representative of the Ministry stated that so far they got the information State-wise only. But in future they would collect statistics that way.

4.145. It is noticed that at the Second Meeting of the Central Forestry Commission held at New Delhi on 22-4-67 it was agreed that every State Forest Departments should have a Forestry Statistical Cell to compile and keep upto date data pertaining to forestry and different activities in the Forest Sector. However, it is understood that very few States have set up such a cell.

4.146. During the course of oral evidence before the Committee, it was pointed out to the representative of the Ministry that statistical data in regard to various matters was not available with the Ministry. The Committee enquired whether the Ministry needed any powers to compel the States to furnish data in time. The representative of the Ministry explained that no powers were required for the purpose as the States did supply the data and the only thing was that it was sometimes very much delayed.

4.147. In a memorandum submitted to the Committee, an expert in forestry had emphasised the need for a comprehensive and accurate forest statistics as under:—

> "For successful planning in forestry it is absolutely necessary to have precise and detailed statistics of growth and yield of forests as also the consumption and demand trends of forest based industries. At present even the total area of forests is not known accurately. It is given as 56.1 million hectares in the Agricultural Statistics and as 68.9 million hectares in the Forest Statistics both being issued by the same agency namely the Directorate of Economics and Statistics. The explanation given by it is not altogether satisfactory. As regards wood and other produce removed from the forests, as trees are sold standing and without any industrywise classification according to their end-use (which is not known precisely) the statistics are not of much use in planning production on the basis of expected demand. Each State and the Centre are now going to have a special Statistical Cell. It should be suggested that the Forms in which Statistics are compiled should be suitably revised to get detailed and classified figures of outturn. Besides this the officers in charge should be required to collect from forest industries their consumption and demand trend figures so that it may be possible to plan production."

**4.148. The Committee are greatly concerned that even after a period of more than a decade and half since the declaration of the National Forest Policy, statistical data in the various fields of forestry are either not available or where available are inaccurate or inadequate. For example statistics relating to forest area in the hilly regions and plains, area according to functional classification, etc. are not available with the Ministry. Surprisingly, as mentioned in the First Five Year Plan that 'accurate statistics regarding the area under forests are not available', the position regarding the non-availability of forest statistics remains more or less the same even today. The extent of forest area in the country is a matter of uncertainty if not guess work altogether. Other important aspects in respect of which satisfactory data is not forthcoming are: the area deforested for various uses since the formulation of the National Forest Policy, extent of forest resources, rate of growth, consumption and demand trend of forest-based industries etc. The States which are the primary agency for furnishing the statistics do not have by and large any machinery to collect such statistics methodically and hence the information required to be furnished by them is very often delayed.**

4.149. In the opinion of the Committee, it is imperative that a high priority is accorded to a well-designed programme to improve data gathering and data processing so that reliable statistics are readily available for the formulation of policies and plans and to evolve methods and techniques for evaluation and supervision over the progress of their execution. The Committee have no doubt that such statistics will provide many insights on the use and productivity of the country's forest resources in satisfying the needs of her economy. The Committee therefore suggest that a well-organised machinery equipped with technical staff and other resources should be available both at the Centre as well as in the States. The Committee also recommend that the past performance of the Statistical Cell in the Central Forestry Wing should be specially scrutinised alongwith the review of the working of Central Forestry Commission as suggested earlier. They strongly feel that the setting up of the Statistical Cells in States/Union Territories should not be delayed any longer and the question should be taken up at an appropriate higher level to expedite their creation. They also suggest that the basic programme of urgently needed information should be drawn up by the Central Forestry Commission for priority action in order to ensure a steady flow of uptodate data. The format for the collection etc. of the data should be linked up with the National Forest Policy Resolution as far as practicable and useful.

## V. FOREST EDUCATION AND RESEARCH

**5.1. The development of Forest Education and Research is intimately connected with the scientific management and conservation of forests.** As pointed out earlier in this Report, the Government of India is chiefly concerned with the Forest Education at professional and sub-professional levels, research and training in forestry in the country. Forest education and training at professional and sub-professional levels and research on forestry and forest products are organised by the Government of India at the Forest Research Institute and Colleges, Dehra Dun. For training Deputy Rangers, Foresters and Forest Guards, there are schools in the States. The State-Forest Departments have small organisations for silvicultural research to study local silvicultural and management problems.

### Forest Research Institute and Colleges

5.2. The Forest Research Institute and Colleges comprise a composite Institute consisting of several units—the Forest Research Institute, the Indian Forest College and the Northern Forest Rangers' College all located at Dehra Dun.

**5.3. In the South, the Madras Government started in 1912 a Rangers'** College of its own at Coimbatore. This College has continued to train Rangers for some of the Southern States. In 1948, in pursuance of a policy to centralise forestry education and to organize and coordinate forestry research in the counrty, the Government of India took over the College and placed it under the same administrative control as that of the Forest Research Institute and the two Forest Colleges located at Dehra Dun.

**5.4. The Forest Research Laboratory, Bangalore established by the Government of Mysore, was taken over by the Government of India in 1958. A Southern Research Centre in Forestry was established at Coimbatore in 1960.**

*Present Organisational set up*

5.5. The Forest Research Institute and Colleges are under the administrative control of the Ministry of Food and Agriculture (Department of Agriculture) of the Government of India. Its administrative head is designated as the President.

5.6. The Forest Research Institute and Colleges at present comprise two main wings *viz.* (1) Forestry Education and (2) Research in forestry, biological sciences and forest products utilisation.

5.7. Education in forestry is conducted in the following Colleges:—

(1) The Indian Forest College, Dehra Dun.

(2) The Northern Forest Rangers' College, Dehra Dun.

(3) The Southern Forest Rangers' College, Coimbatore.

5.8. The Indian Forest College runs a two-year course for training the probationers of Gazetted Forest Service of all the States of the Indian Union. The minimum educational qualification required for admission is a degree in natural sciences or such other subjects as mathematics, economics and mechanical engineering. The average annual intake of students is 90. The head of the College, is designated as Dean. The Northern Forest Rangers' College and the Southern Forest Rangers' College impart training to Rangers of the States of Northern and Southern regions respectively. The minimum educational qualification for the course is Intermediate Standard, or equivalent. The average annual intake is around 250. The heads of the Rangers' College are designated as Principals.

5.9. Besides, probationers of the newly constituted Indian Forest Service are also being trained since April, 1968, in the Indian Forest College at Dehra Dun. A six monthly Refresher Course has also been started in the same College from 1965 for promoted gazetted officers of the State Forest Service.

5.10. The educational activities of the three Institutions are co-ordinated by the Director of Forest Education under the over-all control of the President, Forest Research Institute and Colleges.

5.11. The research wing consists of a number of branches. These were grouped in 1957, following the recommendations of the Champion Committee, into eight Divisions and further re-grouped into the following four Directorates:

(1) Forestry Research

(2) Biological Research

(3) Forest Products Research

(4) Forest Education.

5.12. The Coimbatore unit of the Forest Research Centre is under the Principal, Southern Forest Ranger's College who is also designated as the Head of Biological Research. The unit at Bangalore is under the Head of Utilisation Research.

*Examination by the Estimates Committee (Second and Third Lok Sabha)*

5.13. It may be recalled that the Estimates Committee (1952-53) and (1953-54) had examined the estimates of the Ministry of Food and Agriculture—Forest Research Institute and Colleges Dehra Dun and presented the Sixth Report (November, 1953) which *inter alia* dealt with the Forest Research Institute and Colleges. Action taken by the Government on the recommendations contained in the above Report was examined by the Estimates Committee (1956-57) which presented the Fifty-second Report (March 1957) on the subject.

5.14. The Committee (1964-65) again examined the estimates relating to Forest Research Institute and Colleges, Dehra Dun. The Committee's recommendations are contained in their Seventy-eighth Report (Third Lok Sabha) presented in April, 1965. The present Committee have examined the Action taken by the Government on the recommendations contained in the above Report and presented their Sixty-first Report on the 23rd August, 1968.

5.15. In their earlier Report (78th Report), the Committee have explained in detail the organisational and administrative set up, educational and research activities and functions of the Forest Research Institute and Colleges. Hence it is not proposed to deal with those topics again here.

*Plan provision and expenditure*

5.16. The figures relating to Plan outlay and actual expenditure incurred against them in connection with various research and development schemes undertaken by the Forest Research Institute and Colleges, Dehra Dun, during, the three Plan periods and during the years 1966-67 and 1967-68, are indicated below:—

(Rs. in lakhs)

| | | (Rs. in lakhs) | |
|---|---|---|---|
| (*i*) | First Five Year Plan | 200·00 | 100·00 |
| (*ii*) | Second Five Year Plan | 80·00 | 41·85 |
| (*iii*) | Third Five Year Plan | 99·00 | 17·39 |
| (*iv*) | 1966-67 | 2·36 | 2·64 |
| (*v*) | 1967-68 | 5·50 | 4·58 |

5.17. In the Fourth Plan, a provision of Rs. 2,00.00 lakhs is proposed to be made in the Central Sector for the schemes of Forest Research Institute and Colleges.

*Achievement Audit*

5.18. The Committee note that in pursuance of a recommendation made in their Sixth Report (1953-54) that steps should be taken to appoint a Board of eminent scientists and representatives of the Industry to conduct periodically say every 3 or 5 years, an 'Achievement Audit', an Expert Committee under the Chairmanship of Prof. H. G. Champion, was constituted in January, 1956 to go into the working of the Forest Research Institute and Colleges. The Champion Committee submitted its report in April, 1956.

5.19. A Second Expert Committee with Prof. M. S. Thacker (the then Member, Planning Commission) as Chairman and the Inspector General of Forests, Prof. M. V. Laurie, (Department of Forestry Commonwealth Forestry Institute, Oxford University), Dr. G. P. Kane (Deputy Director General, Directorate General of Technical Development) and Prof. P. Maheshwari (Head of Botany Department, University of Delhi) as members, was appointed in October, 1964. Since Prof. Laurie arrived in India on 9th March, 1965, the Expert Committee could start functioning only thereafter.

5.20. The terms of reference of the Second Expert Committee were:

(a) to review the progress of research done at the Forest Research Institute during the past 8 years (since the appointment of the Champion Committee) and to make an assessment of research with a view to determining its usefulness in relation to extension of work;

(b) to study the organisation of the Forest Research Institute including the regional research centres at Bangalore and Coimbatore and to suggest improvements;

(c) to study the staff position of the Institute *viz.* Overstaffed or provided with staff which is not of the right calibre;

(d) to study proposals for improving the quality and progress of research;

(e) to advise on steps to be taken for ensuring efficiency in the conduct of inevstigations.

(f) to advise on the lines of work which could be adopted in future having regard to technical personnel, equipment and financial resources available to the Institute;

(g) to advise on steps to be taken for establishing liaison with other research institutions so as to derive advantage from their work and avoid duplication of research; and

(h) to advise on steps to be taken to secure publicity and quick application of the results of research.

5.21. That Committee submitted its report on the 17th October, 1966. It contains in all 168 recommendations/conclusions.

5.22. In a written note furnished to the Committee it has been stated that examination of the recommendations of the Expert Committee relating to administrative, organisational set up of the Forest Research Institute and Colleges not connected directly with the question of declaration of the Institute as one of the "National Importance" is in progress. As a result of the examination so far made, 14 recommendations are being implemented and 51 recommendations have been accepted by the Government on principle and the line of action for their implementation is under consideration of the Government in consultation with the President Forest Research Institute and Colleges, Dehra Dun.

5.23. As regards the recommendation to raise the status of the Institute to that of an Institute of National Importance, the Committee have been informed during evidence that a decision in the matter would be taken within six months. For the establishment of Forest Economics Branch, a scheme is being included in the Fourth Plan.

**5.24. As the working of the Forest Research Institute and Colleges has been reviewed thoroughly by the Second Expert Committee and a report submitted in 1966, the Committee have not considered it necessary to examine the same matter again. They are, however, constrained to observe that although a period of more than two years has elapsed, Government are still considering the recommendations made by the Expert Committee and have done little to implement them. In this connection, the Committee are distressed to note the observation of the Second Expert Committee that, 'Its general conclusion was that very little has been done so far on some of the important recommendations of the First Expert Committee and whatever organisational steps were taken, were neither in conformity with the recommendations of the First Committee nor did they help in improving the work of the Institute'. The Committee need hardly emphasise that unless quick decisions are taken by Government on the recommendations made by an expert body, and the same are implemented expeditiously and faithfully by the Government, the very object of appointing such a body is bound to be defeated. The Committee would urge upon the Government to finalise their decisions on all the recommendations of the Second Expert Committee which have already been delayed, and take speedy steps to ensure their early implementation.**

*Forest Research Laboratory, Bangalore*

5.25. As pointed out in the beginning of this Chapter, the Government of India in pursuance of the recommendation of the First Expert Committee (Champion Committee) had taken over in 1958 the Forest Research Laboratory at Bangalore established by the Mysore State in 1938. Since then, it has been functioning as a Regional Centre for conducting research on regional problems. The work of the Laboratory falls into two main categories, namely—(i) Sandal Spike Disease Work; and (ii) Forest Products-work.

5.26. In regard to sandal spike disease research, the work has been going on intermittently for the past 35 years but the basic causes of the disease have not yet been discovered. In this connection the Second Expert Committee recommended that, "Research on control of Sandal Spike Disease should be intensified. It is necessary to apply modern virological techniques to isolate the virus, purify it, determine its diagnositic characteristics and the possibility of culturing it on other easily handled plants. Then the virus should be looked for in other plants, commonly associated with Sandal in the Spike Disease areas.

5.27. This work which is highly specialised should be assigned to competent and experienced Plant Virologist of the grade of Principal Scientific Officer assisted by another well qualified Virologist, a Forest Ranger or Forester with horticultural or nursery experience (to run field stations), a Botanist—preferably one well acquainted with the flora of the types of forest in which sandal grows—and an Entomologist. Bangalore is probably the best centre for this work."

5.28. As regards the working of the Laboratory, the Second Expert Committee has made the following observations:—

> "On the whole, the standard of work at this laboratory is not impressive. There is evidence of a lack of appreciation of the relative importance of the subjects chosen for investigation. Quite unimportant items have been considered to have great economic possibilities and very little work of practical usefulness is being done. Some of the work done duplicates that at Dehra Dun. There does not seem to be much of a personal contact with Forest Departments of the region and there is hardly any liaison with industry. It appeared to the Committee that this sub-centre has not fulfilled the purpose which was set before it. Though the Committee is not very happy with the work of this Centre, it feels that it has a useful role to perform in future. The Committee, there-

fore, strongly recommends that its programmes be re-oriented in the light of the local needs and its work be conducted under the guidance of the corresponding research on technical branches of the Forest Research Institute. The Committee also recommends that an appropriate scientific committee may be set up for drawing up the programme of work of the centre."

5. 29. In pursuance of the above recommendation, Government of India appointed in September, 1967, a Scientific Commitee with President, Forest Research Institute, as Chairman, and Dr. Baini Prasad, Retd. Director of Zoological Survey of India, Shri N. S. Kaikani, Chief Conservator of Forests (Development) Mysore State, and Director, Biological Research Forest Research Institute as members. The Scientific Committee which started functioning in January, 1968, submitted its report in September, 1968. The Scientific Committee have suggested an elaborate machinery to re-orient the work of the Laboratory as well as to deal with Spike disease problem and also an annual assessment of the achievements by a compact high powered Technical Committee. The Report is under consideration of the Government.

5.30. During their visit to the Laboratory in June, 1968, the Committee also have had an occasion to see the work of the Laboratory and discuss its problems with the concerned officials. The Committee have been given to understand that the Laboratory is not properly equipped either in regard to staff or research facilities. The Head of the Laboratory is also entrusted with the administrative work. A post of Senior Research Officer has been lying vacant and for spike disease there is no Entomologist except a raw Research Assistant.

5.31. During evidence, the representative of the Ministry has confirmed that at Bangalore, there is no Entomologist, but only a Research Assistant who looks after the work there. The Entomologist at Coimbatore is required to coordinate the work both at Coimbatore and Bangalore.

**5.32. The Committee are concerned at the adverse remarks made by the Second Expert Committee on the working of the Forest Research Laboratory, Bangalore. They would recommend that the programme and working of this Laboratory should be closely watched and suitable facilities regarding necessary equipment and staff provided to it to make it an effective and useful research centre.**

## VI. FOREST INDUSTRIES

### A. Industries

6.1. The important industries which depend on forests for supply of raw material are pulp, paper and newsprint, veneer and plywood, particle and fibre board, match and saw mills. Rosin turpentine and tanning industries also obtain their raw materials from forests.

*Industrial wood*

6.2. For industrial wood, the country's requirements exceed supply. As against the total requirement of 10.52 million cubic meters, the production is 7.7 million cubic meters. On this basis the *per capita* consumption comes to only 0.02m³as against 0.11 m³ for Asia Pacific Region, 0.62 m³ for U.K. and 1.8m³ for U.S.A.

6.3. Based on various studies undertaken by the Planning Commission, Directorate General of Technical Development and the Department of Agriculture, the requirements of industrial wood on a long term basis are estimated to be as follows:—

(In million cubic metres of roundwood)

| Particulars | 1970 | 1975 | 1980 | 1985 |
|---|---|---|---|---|
| Timber | 11·65 | 15·75 | 22·90 | 33·21 |
| Roundwood . | 1·99 | 2·75 | 3·99 | 5·78 |
| Pulpwood | 0·42 | 2·66 | 4·80 | 9·94 |
| Mathwood | 0·33 | 0·40 | 0·49 | 0·57 |
| Total | 14·39 | 21·56 | 32·18 | 49·50 |
| or say nearly | 14·00 | 22·00 | 32·00 | 50·0 |

As against these figures of demand, the availability of industrial wood in 1975 and 1985 is expected to be 11.9 million cubic meters and 31.0 million cubic meters, respectively, with the use of improved logging techniques and tools, exploitation of untapped forests, plantations of fast growing species etc.

*Wood-based industries*

6.4. The following table indicates the production of different wood-based industries during the years 1950-51 and 1967-68. The anticipated production in 1973-74 has been given in the last column of the Table.

| Name of the Industry | Units | 1950-51 | 1967-68 | 1973-74 |
|---|---|---|---|---|
| Plywood | Cu mtr. | 26,360 | 120,000 | 210,000 |
| Fibre board | -do- | Nil | 30,000* | 64,000 |
| Particle board | -do- | Nil | 16,000* | 64,000 |
| Safety matches | Million boxes of 50 splints | 2,900 | 8,323 | 11,500 |
| Paper & paper board | 1000 tonnes | 114 | 625 | 960 |
| Newsprint | -do- | .. | 31 | 260 |
| Rayon Grade Pulp | -do- | .. | 56·869 | 150 |

*Paper, pulp and Newsprint Industry*

6.5. At the beginning of the First Five Year Plan, there were 17 paper and paper board mills in the country with an installed capacity of 137,000 tonnes per year. At present there are 57 mills with a total installed capacity of 730,000 tonnes per year. In all there are 68 pulp, paper and paper board mills in the country with a total capacity of 1.07 million tonnes. However, about 36 of them are very small units having an annual capacity of 0.11 million tonnes. Paper and Paper Board mills are generally composite mills producing the required pulp also.

6.6. It has also been stated that a new unit for the manufacture of Bamboo Pulp for commercial sale with an installed capacity of 36,000 tonnes per year has been recently commissioned and a unit for Rayon Grade Pulp from bamboo has been in operation for the last four years A second Rayon Grade Pulp mill based on Eucalyptus plantation in Nilgiris is under erection. One more unit is contemplated in Uttar Pradesh to utilise the Eucalyptus Plantations in Haldwani area.

6.7. National Newsprint and Paper Mills Ltd. (Nepa Mills) is the only unit in the country producing newsprint so far. The raw material being used is 70 per cent mechanical pulp from sabai (Boswellia Serra wood and 30 per cent chemical pulp from bamboo. This mill started

*The units in both these industries went into production in 1961.

production in 1955 with an installed capacity of 30,000 tonnes per year. This capacity is being expanded to 75,000 tonnes per year which is expected to materialise by 1969-70.

6.8. Production figures of paper, paper board and newsprint during 1963-64 to 1967-68 are as given below:—

(thousand tonnes)

| Year | Printing & other papers | Paper Board | Newsprint |
|---|---|---|---|
| 1963-64 | 384·8 | 79·8 | 30·4 |
| 1964-65 | 413·0 | 80·3 | 29·2 |
| 1965-66 | 435·1 | 101·2 | 30·3 |
| 1966-67 | 487·6 | 97·5 | 29·4 |
| 1967-68 | 520.0 | 105·0 | 31·0 |

6.9. The rate of growth of demand for paper and paper boards during the First and Second Plan periods was about 8 per cent and 10.9 per cent per annum, respectively. During the Third Plan, the demand rose at the rate of 8 per cent per annum. The growth of demand for paper and paper boards is linked with increase in population, spread in education, rate of industrialisation and improvement in standard of living and purchasing power etc. The annual *per capita* consumption of paper and paper products in India and other countries (1962) is as under':—

| | Per capita consumption (Kg.) | Population (Million) |
|---|---|---|
| | 2 | 3 |
| U.S.A | 206 | 186 |
| Canada | 134 | 19 |
| Swedan | 128 | 7 |
| U K. | 106 | 53 |
| West Germany | 85 | 56 |
| Australia | 82 | 10 |
| Japan | 57 | 95 |
| Italy | 40 | 51 |

*Dr. L. C, Sharma, 'Future of Forest-based Industries in India' A. I. C. C. Economic Review, May 15, 1968, page 30, Fourth Plan Proposals (Forestry Sector), July, 1968 dp 21-22.

| 1 | 2 | 3 |
|---|---|---|
| Poland | 23 | 30 |
| U.S. S. R. | 16·2 | 223 |
| Brazil | 10 | 70 |
| China (mainland) | 2·6 | 659 |
| Ceylon | 2·5 | 10 |
| Pakistan | 1·6 | 86 |
| India | 1·5 | 470 |
| World | 26·5 | 30·60 |

6.10. The fibrous raw material used at present in the paper industry consist of bamboos, hardwood, sabai grass, conifers, bagasse and rags. Their break up is bamboos 73 per cent, hardwoods 9 per cent, sabai grass 8 per cent, conifers 5 per cent, bagasse 4 per cent and rags 1 per cent. The varieties of paper made include writing and printing paper, craft and wrapping paper, art and chromo paper and paper board and speciality papers.

6.11. For the Fourth Plan period, the demand of paper and paper boards is estimated to rise by 7 per cent per annum. According to the estimates prepared by the Directorate General of Technical Development, the additional requirements of raw material for achieving the production targets in respect of pulp, paper and paper boards and newsprint would be of the order of 1.83 million tonnes as detailed below.

| | Additional production to be achieved | Additional requirements for raw material |
|---|---|---|
| | (Tonnes) | (Tonnes) |
| (*i*) Paper & Paper Board | 270,000 | 736,000 |
| (*ii*) Newsprint | 230,000 | 460,000 |
| (*iii*) Dissolving Pulp | 90,000 | 300,000 |
| (*iv*) Paper Pulp | 120,000 | 316,000 |
| Total | 710,000 | 1,832,000 or say 2 million tonnes per year. |

6.12. As stated above, Bamboo forms about 75 per cent of the raw material consumed by the Pulp and Paper Industry at present. According to the information given in the 'Study on Forest Raw material for Pulp, Paper and Newsprint' conducted by the Committee on Natural Resources, Planning Commission, the availability of bamboo could be made available if the bamboo bearing forests are properly tended and the inaccessible areas are opened up. Out of this quantity of 24 lakh tonnes, if it is taken that only 18 lakh tonnes would be available for pulp and paper, leaving 6 lakh tonnes for other uses, the total availability of bamboo to the pulp and paper industry should be approximately 7+18=25 lakh tonnes. The total requirement of bamboo is considerably greater and would progressively increase in future. It has been stated that to meet this gap, bamboo is being planted up under the scheme 'Plantation of Quick Growing Species' Special emphasis is also being laid on development of forest communications to open up hitherto inaccessible bamboo bearing areas. For reducing dependence on bamboo, efforts are being made to popularise the use of hardwoods to the extent of about 70 per cent in admixture with bamboo pulp. Some of the papermills have already made a beginning in this direction. For supply of hardwoods, plantations of Eucalyptus and other quick growing species have been raised on a large scale under the Centrally Sponsored 'Scheme of Quick Growing Species'. Increased use of bagasse and other miscellaneous raw materials like grass, jute sticks etc. is also proposed.

6.13. Nearly half of additional raw material requirements for newsprint industry are planned to be met from Eucalyptus plantations raised in the earlier Plans in Kerala where a newsprint mill is proposed to be established and from the coniferous forests of Himachal Pradesh where another newsprint mill is also proposed to be set up. Regarding the requirements of raw material for producing paper pulp for meeting the demand of expansion programme of existing mills, Ministry of Industrial Development and Company Affairs proposes to explore the possibility of establishing two large pulp mills with a capacity 250—300 tonnes per day based on the untapped forest resources of Bastar region in Madhya Pradesh and Assam.

*Plywood Industry*

6.14. There are at present 74 plywood factories with an installed capacity of 147,000 cubic meters per annum located mainly in the States of Assam, Kerala, Mysore, West Bengal, Uttar Pradesh, Jammu and Kashmir and the Union Territory of Andaman and Nicobar Islands. It has been stated, 'India was an importer of plywood in 1947 and the imports were of the order of Rs. 1.5 crores per annum. Today the country produces plywood valued at approximately Rs. 12 crores. Exports of ply-

wood are also picking up and during 1966-67 stood at Rs. 16.8 lakhs. Under the Export Incentive Scheme, exports of plywood are expected to rise to at least Rs. 50 lakhs by 1973-74. Production figures of different categories of plywood during 1961–68 are as under:–

| | (Thousand sq. meters) | | | (Ex-factory value) |
|---|---|---|---|---|
| Year | Tea chest | Commercial chest | Total | (Rs. thousand) |
| 1961 . . | 9052 | 6318 | 15370 | 66,082·4 |
| 1962 . . | 9795 | 7465 | 17260 | 70,684·9 |
| 1963 . . | 10400 | 10030 | 20430 | 83,760·0 |
| 1964 . . | 9740 | 10630 | 20370 | 83,520·0 |
| 1965 . . | 10400 | 12370 | 22770 | 93,130·0 |
| 1966 . . | 9670 | 12670 | 22340 | 91,330·0 |
| 1967 | 10870 | 14400 | 25270 | 125,190.0 |
| 1968 . . | 12500 | 17500 | 30000* | |

6.15. The main raw materials required by the industry are timber and adhesives. According to the Working Group on Fourth Plan, the wood requirements of the plywood industry would represent roughly 2.2 per cent of the estimated demand for the industrial wood and that in 1973-74 would be about 2.9 per cent. It has been stated that the requirements of the raw materials for the plywood being small, no difficulty is envisaged regarding their supply.

6.16. It has, however, been pointed out that the industry has reached a state of development where for economic reasons, technical considerations and consumer demand it has become essential for factories to diversify their production to get the maximum output from the high value raw material, the ply logs.

*Match Industry*

6.17. The industry is divided into two sectors (a) mechanised, producing about 60 per cent of the total production (b) non-mechanised concentrated mainly in Madras producing about 40 per cent of the total production. In all, in 1949-50, there were 192 units with a total capacity of 35.3 million gross boxes of 60's and actual production of 27 million gross boxes. In 1955-56 there were 234 units, and the production was 34.1 million gross boxes, In 1960-61 the number of units rose to 439, ('A' class 6, 'B' class 85, 'C' and 'D' class 348) with a production of 45

*Estimated.

million gross boxes of 50 splints each. Production of matches in the country for 1959-60 onwards is given below:—

| Year | Production (Million gross boxes of 50 sticks each) |
|---|---|
| 1959-60 | 44·03 |
| 1960-61 | 46·05 |
| 1961-62 | 45·50 |
| 1962-63 | 50·13 |
| 1963-64 | 47·44 |
| 1964-65 | 51·87 |
| 1965-66 | 52·33 |
| 1966-67 | 59·39 |
| 1967-68 | 57·80 |

6.18. The main timber *i.e.* about 60 per cent. used by the industry, is Semal. The demand of matchlogs in 1968-69 is estimated at 312,300 cu. m. The match industry also gets supply of matchlog from private land to meet their demand. The States of U.P., Madras, Maharashtra, West Bengal and Assam and Union Territory of Andaman and Nicobar Islands are major suppliers of matchlogs.

6.19. By 1980, the demand is likely to rise to 95 million gross boxes when the industry will require 4.75 lakh cubic metres of wood in the log form.

6.20. The Committee understand that with the scarce supply position of the matchwood, the industry has been successfully using several new species for match manufacture.

*Particle Board and Fibre Board Industry*

(i) *Particle Board*

6.21. Sheets of particle board are manufactured from small particles of wood or other ligno-cellulosic fiberous substances handled together with an organic binder generally urea–formaldehyde or phenol–formaldehyde resin. Any wood waste from saw mills (not saw dust) or from wood working factories, "lops and tops" from the forests or any non-commercial timber or fuelwood can be used for making such boards.

6.22. There are 8 particle board plants with a capacity of 45,000 tonnes (72,000 cubic metres) per annum. The production of particle board from 1961 onwards is given below:

| Year | Production |
|---|---|
| | (tonnes) |
| 1961 | 738 |
| 1962 | 703 |
| 1963 | 3,399 |
| 1964 | 5,940 |
| 1965 | 8,079 |
| 1966 | 7,083 |
| 1967 | 7,815 |
| 1968 | 7,800 |

6.23. During evidence, the representative of the Ministry has stated that the development of Particle Board industry is encouraged from two points of view, firstly, to utilise the wood waste available in the forest timber-based industries and secondly, to make available particle board at a cheaper price and to replace the sawn timber used in building construction activity. The lack of progress by the industry is due to high cost of production.

(ii) *Fibre Board*

6.24. Fibre Board is formed from an inter-felting of fibres which produces a mat, with a characteristically natural board of fibre itself. Mixed woods or woods with a high density are not favoured and green wood is usually preferred.

6.25. There are three fibre board plants with a capacity of 45,400 tonnes (64,000 cu. metres) per annum. The production of fibre board during the years 1961—1968 is as follows:—

| Year | Production |
|---|---|
| | (in tonnes) |
| 1961 | 8,958 |
| 1962 | 11,166 |
| 1963 | 11,288 |
| 1964 | 13,850 |
| 1965 | 18,537 |
| 1966 | 17,600 |
| 1967 | 12,962 |
| 1968 | 16,800 |

6.26. It has been stated by the Ministry that the demand for Indian made fibreboard is picking up quite well in the export markets of the Middle East and it is hoped that during the Fourth Plan, exports of fibre board would show a distinct upward trend. During 1964 the exports of fibre board stood at Rs. 12.15 lakhs per annum. Exports are expected to rise to Rs. 50 lakhs per annum by 1973-74 under the Export Incentive Scheme.

6.27. In a written note, the Ministry have informed that the following measures have been initiated to give fillip to the Particle Board and Fibre Board Industries:—

(i) Both particle board and fibre board (hard board and insulation board) have been recently included in the schedule of rates applicable to the Central Public Works Department (CPWD) and Military Engineering Service (M.E.S.) with a view to increase their utilisation in the building construction activities undertaken by these organisations and public sector projects. It is, therefore, expected that within the foreseeable future the State Public Works Deptts. would also adopt these materials in their respective schedule of Rates.

(ii) The Govt. of India have abolished the excise duty on finished particle board and this is expected to make this material somewhat competitive with other board materials and sawn timber.

(iii) The Govt. of India have also announced a differential rate of excise duty on hard board made by the dry process with a view to create conditions suitable for resumption of production of hard board in the Assam Plant which is based on the dry process.

(iv) The question of reducing the price of urea and formaldehyde, the two basic raw materials which go into the manufacture of U.F. Resin Adhesive is at present under examination. The question of the effect of heavy rate of excise duty on U.P. Resin is also at present under examination and a decision in this matter is expected in the near future.

(v) Exporters of wood panel products including particle board are entitled to a 10 per cent replenishment licence and also to a cash subsidy of 15 per cent on F.O.B value of exports made by them.

6.28. The Committee note that while the demand of industrial wood in the country has been estimated at 22 million and 50 million cubic metres in 1975 and 1985, its production is expected to be 11.9 million and 31 million cubic metres respectively. There will thus be a gap of the order of about 10 million cubic metres in 1975 which will widen to 19 million cubic metres in 1985. This underlines the need for a vigorous drive and dynamic approach to organise extensive plantations of industrial woods like teak, soft wood, educalyptus etc. to cater to the growing demand of forest based industries. The Committee hope that the implementation of Pre-Investment Survey and Resources Survey Schemes would throw up new and unexploited forest resources to fill this gap to some extent.

The Committee would like to emphasise the need to utilise all types of available wood by the wood-based industries. This called for extensive and intensive research in the utilisation of various types of inferior woods available in the country. In this connection the Committee are inclined to agree with the recommendation made by the Development Council for Paper, Pulp and Allied Industries in their Annual Report of 1967-68 that "There are appreciably large untapped resources of mixed tropical woods in different parts of the country. Efforts have already been made by some of the Paper Mills to utilise such hard woods and have met with some success. However, further research work is required before this can be established as a suitable source of raw material. The Forest Research Institute should be requested to take up the question of evolving suitable process for pluping of mixed hard woods as well as the mixtures of such hard woods and bamboo."

### B. Minor Forest Products

6.29. Besides wood, forests provide a large number of minor products which are essential for certain industries or serve as valuable articles for export. Some of these important minor forest products are resin and turpentine, kattha and cutch, lac and shellac, tanning materials, sandalwood, cane and gums.

In the Third Plan, it has been stated,—

> "Indian forests have a large variety of minor products, there being over 3000 species, besides a number of animal products. Considerable scope for exploitation and development exists, for instance, in respect of medicinal plants, essential oils, resins, fatty oils, fats, waxes, starches, bamboos, canes, grasses and insect products, such as, honey, lac and bees' wax. Export possibilities also exist for certain medicinal plants, such as, Rauwolfia serpentina. Proposals for the exploitation of various forest products are provided for in the plans of States."

(i) *Resin and turpentine*

6.30. Resins are exudations of trees like chirpine and are mostly tapped in Punjab, Utar Pradesh and Himachal Pradesh. Resin is obtained which on distilation gives turpentine (25 per cent) and resin (75 per cent). Turpentine is mainly used as a solvent for paints and varnishes but is now facing competition from mineral oils which are cheaper. Resin is used for sizing of paper, manufacture of laundry soap, lenoleum oils and greases, adhesive tape, rubber products, printing ink, paints etc. In 1959, 28,000 metric tonnes of resin was produced (Uttar Pradesh, 12,400; Himachal Pradesh, 6,700; Punjab, 6,500 and J and K, 2,600). The requirements in 1970 are estimated as 60,000 and in 1975 as 85,000 metric tonnes. Improvements in tapping methods are expected to increase the yield only by 50 per cent.

(ii) *Kattha and Cutch*

6.31. *Kattha* and *Cutch* are obtained from the hardwood of *Khair* trees mostly found in Madhya Pradesh, U.P. and Rajasthan. Besides being used in paan leaf chewed extensively in India and in the far east, *Kattha* is used for dyeing fishing nets, as boiler compound and also in the machines used for boring. Two factories—one in Bareilly (U.P) and other in Shivpuri (M.P.) are producing *Kattha* by modern methods. The latter factory also utilises other bye-products. In South-east Rajasthan, it is produced by country-methods.

6.32. The Committee have been informed that information on total requirement of *Kattha* is not available. It is estimated that about 2000 to 2500 tonnes of *Kattha* is being produced by country method and 1000 to 1500 tonnes annually by factory methods. Almost the entire quantity of *Kattha* is consumed internally leaving a small quantity for export. On an average, about 250 tonnes of cutch, which is a bye-product of *Kattha* is exported annually.

6.33. The Committee have further been informed that *Khair* trees are raised under the scheme, "Economic Plantations of Industrial & Commercial Uses" under the Development Plans in some States. Separate information on *Khair* plantations raised in various States is not available.

(iii) *Lac and Shellac*

6.34. Lac is obtained from the forests of Madhya Pradesh and Bihar, where the insect lac bug feeds on host trees like kusum, bur, pipal, banyan, palas, sissoo, siris and gular. It is largely used either in medicine or dyeing silk, making bangles, gramophone records, etc. The average

annual production, imports and exports of lac for the period 1947 to 1955 were as under:—

| | (Metric tonnes) |
|---|---|
| Production of stick lac . . . . . | 37,980 |
| Imports of stick lac . . . | 4,315 |
| TOTAL . | 42,295 |
| Less internal consumption . . . . | —1,150 |
| alance exported . . . . . | 41,145 |

The production during 1956–65 fell to 12,540 tonnes. India meets about 70 per cent of the world demand.

(iv) *Sandalwood*

6.35. Sandal is a small evergreen tree, which thrives on the well-drained loamy lateritic soils of the highlands mainly in South India. The tree lives parasitically on other plants by sending hausteria which attach to their roots. As tree grows, essential oil develops in the roots and the heartwood. Oil is distilled from the roots and heartwood. About 3,900 metric tonnes of sandalwood is produced annually, out of which nearly 2,500 metric tonnes (65 per cent) is produced in Mysore forests. Nearly 1,00,000 kg. of sandalwood oil valued at Rs. 1 crore is annually exported from India mainly to U.S.A., U.K., France, Switzerland, Italy, Japan Australia and Germany.

6.36. Deodar oil is another essential oil produced by distillation of Cedrus deodar wood waste. Its annual production is about 5,000 kilos.

6.37. The Committee enquired what special efforts were being made to develop minor forest products including the medicinal plants and particularly those which earned foreign exchange. In a written note, Ministry have stated that from the Third Plan period, special care is being taken to cultivate the products which already have foreign markets or which may have in future. A sum of Rs. 151.74, Rs. 63.43 and Rs. 52.75 lakhs has been spent on the development of minor forest products during the Third Plan and the two years 1966-67 and 1967-68, respectively. As for medicinal plants, the Ministry have informed that since they are included in the minor forest products, no separate information is available in respect of the specific measures undertaken to develop them. It is however not considered advisable by the Govt. to cultivate medicinal

plants on a large scale unless there is a ready market for them. In evidence also the representative of the Ministry has stated that there is no long term plan for planting medicinal plants as the main function of the forestry development is to concern themselves with major and minor forest produce. Some States have made efforts but the collection and disposal of these is not economical.

6.38. State-wise information as to the specific steps taken in regard to the development of minor forest products, available with the Ministry is as under:—

1. *Andhra Pradesh.*—An amount of Rs. 1 lakh has been provided for raising plantations of medicinal plants during IV Plan.

2. *Maharashtra.*—An amount of Rs. 9.77 lakhs has been spent on raising plantations of Minor Forest Products, including medicinal plants during the Third Plan. An amount of Rs. 9.49 lakhs has been spent during the post-Third Plan period, on raising of Agavaa, Cashewnut and medicinal plants.

3. *Madhya Pradesh.*—All steps necessary for the development and regulation of Minor Forest Produce are being taken in the State.

4. *Mysore.*—A beginning has been made with the raising of Rauwolfia plantations.

5. *U.P.*—Schemes for the development of minor forest produce and medicinal plants are already under operation.

6. *Punjab.*—There is not much scope for the development of Minor Forest Produce in the State.

7. *West Bengal.*—Every year about 500 hectares are taken up for plantations of various species yielding Minor Forest Produce. For the IV Plan, a special scheme has been formulated at a total cost of Rs. 30 lakhs. Medicinal plants are also being raised under the charge of separate Medicinal Plants Directorate.

8. *Himachal Pradesh.*—An amount of Rs. 5.05 lakhs has been spent on Survey and cultivation work relating to the development of minor forest produce. An amount of Rs. 5 lakhs has been proposed for carrying out survey and development of medicinal plants during the IV Plan.

9. *Tripura.*—In all 267.91 hectares of plantations of various species yielding important minor forest products have been raised since 1961. No long term plan about medicinal plants has been formulated. Medicinal plants, in small scale, are, however, being raised in the Territory.

10. *N.E.F.A.*—There is a special scheme for raising of Minor Forest Produce with a view of help the local people, and for earning foreign exchange by their export. During the 3rd Plan, an amount of Rs. 1.39 lakh was spent under the scheme.

**6.39. It is well known that Indian forests are very rich in minor forest Products and provide ample scope for their further growth and development. Many of these products like lac, sandalwood and medicinal herbs etc. are also good foreign exchange earners. The Committee urge that vigorous and sustained efforts should be made for the development of minor forest products.**

## C. Railway Sleepers

6.40. One of the important uses of wood is as railway sleepers. The percentage of wooden sleepers used is Broad Gauge 20.25 per cent, Metre Gauge 53.88 per cent and Narrow Gauge 71.7 per cent.

6.41. The total requirements of the Railways in this regard during the years 1962-63 to 1968-69 have been as follows:—

| | B.G. | M.G. | N.G. |
|---|---|---|---|
| (1) 1962-63 | 17,92,000 | 18,63,000 | 4,12,000 |
| (2) 1963-64 | 18,20,000 | 19,39,000 | 5,05,000 |
| (3) 1964-65 | 15,46,000 | 19,89,000 | 5,66,000 |
| (4) 1965-66 | 14,73,000 | 21,55,000 | 3,91,000 |
| (5) 1966-67 | 14,92,000 | 17,38,000 | 44,000 |
| (6) 1967-68 | 20,53,000 | 19,93,000 | 90,000 |
| (7) 1968-69 | 16,00,000 | 16,00,000 | 34,000 |

6.42. As against the above requirements, the actual procurement from the Forest Departments has been as follows:—

| | B.G. | M.G. | N.G. |
|---|---|---|---|
| (1) 1962-63 | 15,74,261 | 18,87,171 | 4,69,251 |
| (2) 1963-64 | 14,55,000 | 21,53,000 | 6,21,000 |
| (3) 1964-65 | 13,84,283 | 21,93,528 | 7,02,648 |

| | B.G. | M.G. | N.G. |
|---|---|---|---|
| (4) 1965-66 . . . . . | 12,81,073 | 13,39,221 | 3,76,135 |
| (5) 1966-67 . . . . . | 16,15,330 | 13,74,121 | 72,977 |
| (6) 1967-68* . . . . | 13,30,328 | 11,21,063 | 2,33 9 |
| (7) 1968-69 . . . . . | Not available | | |

*Provisional

6.43. At the meeting of the Standing Committee of the Central Board of Forestry held at Bhopal in September, 1967, the Secretary (Agriculture) stated that since the demand for sleepers from Railways was going down the possibility of finding export market for these sleepers should be explored. He further said that in view of lesser demand the Railways were bound to accept only first quality and other sleepers would have to be disposed of. The Standing Committee recommended "that the export possibilities of surplus sleepers should be examined."

6.44. However, during evidence, the representative of the Ministry of Railways clarified that so far the Railways had been taking all the wooden sleepers available in the country and there was no proposal to dispense with the wooden sleepers or replace them with the concrete or steel sleepers. In introducing other type of sleepers, the aim is to bridge the gap between the requirement and the available supply. But the Railways might have to go in for concrete sleepers on comparative economic consideration also as during the last 7 or 8 years the cost of wooden sleepers had steeply risen. There had been a decline in Railway demand for M.G. Sleepers because of new line constructional activities coming down. There had also not been any fresh demand for narrow gauge sleepers. But the demand for B.G. sleepers was as ever before.

6.45. The representative of the Ministry of Railways added that it was not possible under all circumstances to substitute wooden sleepers by steel or other sleepers. In fact, in certain circumstances, there was necessity of wooden sleepers which were insulated. Metal sleepers had to be insulated under very elaborate conditions. He further added that there was no regular import of wooden sleepers as such.

6.46. The Committee enquired on what basis the Standing Committee came to the conclusion about the decline in Railway demands of the wooden sleepers. The representative of the Ministry explained that it was only in respect of metre and narrow gauge sleepers that the demand had declined and it was only in respect of those types that the efforts were being made to find out export market.

6.47. It has been stated that the scope for consumption of sleepers other than first quality, in particular, sleepers from non-durable wood is

limited on account of shortage of creosote oil in the country for treatment of such timbers and import of creosote would naturally involve foreign exchange.

**6.48. The Committee note that the Railways are going in for concrete or steel sleepers in place of wooden sleepers to meet some of their requirements as the cost of wooden sleepers has increased considerably. This has resulted in the decline of the demand for wooden sleepers by the Railways. They however understand that in certain circumstances, there is no substitute for wooden sleepers which are insulated and hence the same would continue to be used by the Railways. The Committee urge that efforts should be made to find export markets for the types of sleepers whose demand by the Railways is declining.**

## D. Exports and Imports

6.49. The total value of exports of major forest products in 1967-68 was Rs. 77.50 million as against Rs. 29.30 million in 1958-59. The export of minor forest products in 1967-68 valued at Rs. 129.21 million as against Rs. 109.56 million in 1958-59. Item-wise details are given in the following tables*:

(In thousand rupees)

| Year | Major Forest Produce | | | | | |
|---|---|---|---|---|---|---|
| | Wood, lumber and Cork | Pulp and Waste paper | Wood & Cork Manufacture | Paper, paper-board and manufacture thereof | Wood furniture & fixtures excluding artware | Total Major Forest Produce |
| 1958-59 | 16,623 | 5 | 1,489 | 7,400 | 3,791 | 29,308 |
| 1959-60 | 21,372 | 3 | 1,185 | 6,701 | 3,662 | 32,925 |
| 1960-61 | 24,605 | 10 | 972 | 6,314 | | 31,901 |
| 1961-62 | 28,311 | 1,144 | 725 | 7,849 | 914 | 38,613 |
| 1962-63 | 32,664 | 95 | 975 | 7,840 | 518 | 42,092 |
| 1963-64 | 26,958 | 7 | 1,384 | 6,727 | 258 | 35,334 |
| 1964-65 | 22,934 | 47 | 2,733 | 9,585 | 319 | 35,618 |
| 1965-66 | 19,077 | 324 | 981 | 12,033 | 1,009 | 33,424 |
| 1966-67 | 31,645 | 28 | 2,125 | 18,638 | 2,763 | 55,199 |
| 1967-68 . . | 42,375 | 13 | 2,689 | 28,354 | 3,074 | 77,505 |

*Source: Monthly Statistics of Foreign Trade of India, Vol. I, published by the Department of Commercial Intelligence & Statistics, Calcutta.

(In thousand rupees)

| Year | Minor Forest Produce | | | | | |
|---|---|---|---|---|---|---|
| | Plants and parts of plants for use in dyeing and tanning | Natural gums, resins, Balsam and lac and lac products | Vegetable material for plaiting, etc. | Plants, seeds, flowers and parts of plants | Important wild animal, not for food | Total Minor Forest Produce |
| 1958-59 . . | 11,098 | 70,101 | 2,751 | 19,323 | 6,295 | 1,09,568 |
| 1959-60 . . | 10,387 | 82,210 | 2,574 | 28,598 | 10,779 | 1,34,548 |
| 1960-61 . . | 10,445 | 86,110 | 1,992 | 20,856 | .. | 1,19,403 |
| 1961-62 . . | 11,617 | 66,418 | 3,888 | 28,218 | 5,593 | 1,15,734 |
| 1962-63 . | 12,925 | 72,830 | 2,866 | 25,749 | 4,570 | 1,18,940 |
| 1963-64 . . | 11,420 | 80,331 | 3,200 | 32,687 | 3,608 | 1,31,254 |
| 1964-65 . | 7,205 | 74,489 | 4,017 | 39,434 | 2,280 | 1,27,515 |
| 1965-66 | 8,242 | 72,194 | 1,890 | 36,891 | 1,914 | 1,21,131 |
| 1966-67 . | 4,488 | 76,933 | 606 | 44,313 | 6,278 | 1,32,618 |
| 1967-68 . . | 10,521 | 73,936 | 717 | 36,205 | 7,836 | 1,29,215 |

6.50. The total value of imports of major forest products in 1967-68 was Rs. 301.57 million as against Rs. 163.31 million in 1958-59. The import of minor forest produce in 1967-68 was of Rs. 21.64 million as against Rs. 28.61 million in 1958-59. The detailed figures* are given below:

(In thousand rupees)

| Year/Particulars. | Major Forest Produce | | | | | |
|---|---|---|---|---|---|---|
| | Wood, lumber & Cork | Pulp & Waste paper | Wood Cork Manufs. | Paper, paper board & manufs. thereof | Wood, furniture & fixture excluding artware | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1958-59 . . | 29,220 | 48,331 | 5,043 | 80,007 | 715 | 1,63,316 |
| 1959-60 . . | 58,450 | 67,965 | 4,264 | 1,05,628 | 934 | 2,37,241 |

*Source: Monthly Statistics of Foreign Trade of India, Vol. I., published by the Department of Commercial Intelligence & Statistics, Calcutta.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| 1960-61 | 41,414 | 67,284 | 4,974 | 1,17,403 | 155 | 2,31,230 |
| 1961-62 | 22,206 | 66,863 | 5,484 | 1,56,964 | 43 | 2,51,560 |
| 1962-63 | 24,904 | 95,144 | 5,198 | 1,33,371 | 6 | 2,58,623 |
| 1963-64 | 10,547 | 96,598 | 4,203 | 1,18,578 | 10 | 2,30,936 |
| 1964-65 | 18,337 | 79,743 | 5,015 | 1,30,951 | 72 | 2,34,118 |
| 1965-66 | 18,214 | 58,804 | 5,274 | 1,33,801 | 1,116 | 2,17,209 |
| 1966-67 | 13,878 | 92,813 | 3,860 | 2,03,050 | 1,488 | 3,15,089 |
| 1967-68 | 16,665 | 1,03,077 | 2,774 | 1,76,382 | 1,677 | 3,01,575 |

(In thousand rupees)

| Year | Minor Forest Produce | | | | | Total |
|---|---|---|---|---|---|---|
| | Plants & parts of plants for use in dyeing and tanning | Natural gums, resins, balsams & lac & lac products | Vegetable material for planting etc. | Plants, seeds, flowers and parts of plants | Important wild animals not for food | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1958-59 | 3,483 | 19,931 | 195 | 4,643 | 362 | 28,614 |
| 1959-60 | 4,426 | 18,228 | 105 | 3,977 | 477 | 27,233 |
| 1960-61 | 4,505 | 18,909 | 150 | 3,607 | .. | 27,171 |
| 1961-62 | 3,592 | 11,245 | 107 | 3,992 | 1 | 18,937 |
| 1962-63 | 3,533 | 9,446 | 111 | 3,827 | .. | 16,917 |
| 1963-64 | 2,977 | 6,300 | 117 | 3,151 | 1 | 12,852 |
| 1964-65 | 3,514 | 10,421 | 93 | 3,843 | .. | 17,871 |
| 1965-66 | 2,314 | 12,147 | 56 | 3,457 | 3 | 19,977 |
| 1966-67 | 4,559 | 16,163 | 59 | 3,986 | 83 | 24,850 |
| 1967-68 | 2,848 | 14,392 | 88 | 4,252 | 86 | 21,646 |

6.51. The Committee have been informed that the policy of gradually liberalising timber exports keeping the country's requirements in view has been adopted in the recent years. Thus, from 1965-66 onwards, up to 1000 cubic tons of ornamental timber from Andamans was

allowed for export annually in relaxation of the complete ban on timber export from these Islands. The export policy was further liberalised during 1966-67. At present, export of coniferous timber is being allowed subject to an annual ceiling of 10,000 cubic tons of Deodar and 10,000 cubic tons of Chir. This policy of liberalising exports continued and during 1967-68 the annual export ceiling for Teak was fixed at 10,000 cubic tons against 2,000 cubic tons during 1966-67. Export ceiling in case of rose-wood is 12,500 tonnes. Besides, the restrictions of minimum price, sizes and requirements of certificates have been done away with.

6.52. During evidence, the representative of the Ministry stated that the export of minor forest products was more or less constant.

6.53. In reply to a further question, the representative of the Ministry stated that information regarding competitive capacity both in quality and price in foreign markets of forest products was not available with the Ministry as they were concerned only with advising the Ministry of Commerce as to how much of timber at various places could be allowed to be exported. They also did not have any marketing intelligence as to which countries wanted to import and what species—their specific sizes, etc. and at what prices these countries would like to import. At present, the traders themselves found out the position from various sources. Recently, however, the Ministry had started collecting information through the embassies with the aim of encouraging exports to earn foreign exchange.

6.54. In reply to another question, it was stated that except 2000 tonnes of timber which was permitted for export, the entire supply from Andamans was consumed within the country by the Railways and Industries. After the little Andamans had developed the question of increasing exports would be considered.

6.55. In October, 1966, the Central Board of Forestry at its Tenth meeting held at Simla adopted the following resolution:—

> "The Board strongly recommend that suitable steps be taken by the State Governments/Union Territories Administrations to grow those species of bamboos and canes which have an export potential."

6.56. The Committee have been informed that the President, Forest Research Institute and Colleges Dehra Dun, has prepared a detailed note indicating various species of bamboos and canes which are likely to have export potential. The note is stated to have been circulated to the States/Union Territories. From the information received by the Ministry from State/Union Territories and furnished to the Committee, it is found that only a few States like Andhra Pradesh, Gujarat, Orissa, Jammu and Kashmir and U.P. have taken action pursuant to the Board's above recommendation. In West Bengal and Bihar, the scope for these

plantations does not exist. Rest of the States have either expressed inability to undertake the work or are still thinking to take action.

6.57. At the Bhopal meeting of the Standing Committee of the Central Board of Forestry held in September, 1967, it was recommended that, "information on exportable timbers should be collected and passed on to the States. Assistance of the Export Cell in the Department of Agriculture should be made available to the States."

6.58. Asked what action has been taken on the above recommendations, it has been stated that the information regarding total outturn of ornamental wood, the nature of consumption within the country etc. is being collected from the States. Asked further what assistance has been rendered to the States by the Export Cell in the Ministry as indicated at the meeting by the Agriculture Secretary, the representative of the Ministry stated that it cannot do anything in this regard.

6.59. Subsequently, in a written note, the Ministry have stated as follows:—

> "At our request, the Ministry of Commerce have collected the information through our Missions abroad regarding various types of timber imported by the importing firms and the source from where imported. The Export Cell has circulated the information collected as above to various States."

**6.60. The Committee note that the export of major and minor forest products in 1967-68 stood at Rs. 77.5 million and Rs. 129.21 million respectively. During the same year the import of major forest produce was Rs. 301.57 million and minor forest produce Rs. 21.64 million. Thus the import of major and minor forest products is still of a very high order. The Committee feel that there is considerable scope for increasing the exports and reducing the imports of forest produce. They urge that vigorous efforts should be made in this direction. In this connection the Committee suggest that the feasibility and utility of organising a separate export cell under the I.G. Forests for collection and dissemination of information in this regard, may also be examined.**

## VII. WILD LIFE CONSERVATION AND MANAGEMENT

### A. Importance

7.1 Wild life fulfils an aesthetic purpose and also stimulates tourist trade. It is a national asset, an inheritance which it is the duty of the present generation to pass on unimpaired to posterity. Life would become indeed very dull and colourless if man did not have these magnificient animals and birds to look at and to play with. Modern biological sciences would be proper if some species of wild life disappeared.

*Species and distribution.*

7.2. Wild life is an integral part of the forests. Nature has endowed this country with a very rich wild life which in its variety and beauty compares favourably with that of any country of the world. The existing wild life is an admixture of elements of Indian, Indo-Chinese, Ethiopian and European elements, each predominating in those parts of the country which are most suited to their requirements. The Indo-Chinese forms such as the Pandas, Thamin, HogBadgers, Crestless Porcupine, Goat Antelopes etc. are found in the wet and moist forests of Eastern India adjoining Burma. The fauna of Kashmir and the Western Himalayas is characterised by a predominance of types such as the Kashmir Stag, the Ibex and Markhor which are similar to those of the Central Asia and Eastern Europe, while the fauna of the Indian Desert resembles that of the Middle-East countries. The true Indian species such as the Black Buck, Nilgai, Cheetal and the four-horned Antelope are found chiefly in the Indian peninsula. The faunal forms which are typical of their respective regions have, however, spread and extended their range gradually, resulting in a considerable inter-mixing of species and the range of the fauna typical of one region overlaps that of another.

7.3. It is estimated that there are over five hundred different species of mammals, 2000 species of birds and more than 30,000 forms of insects apart from many varieties of fish, amphibia and reptiles. Of the mammals, the conspicuous ones are—elephant in the forests of Mysore, Kerala, Orissa, Assam and parts of the Uttar Pradesh; rhinoceros in Assam and Bengal; the wild-buffalo in Assam and forests of Baster in Madhya Pradesh; bison in the Southern and Central India Forests; lion in the Gir forests of Gujarat; tiger almost throughout India except in Jammu and Kashmir and part of Punjab and Rajasthan; panther in almost all forests with several, sub-species; wild-ass in the Rann of Kutch; stag in Kashmir;

barasingha in Uttar Pradesh, Assam, and parts of Madhya Pradesh, Sambhar, Cheetal, Nilgai, Chinkara and black-buck in the deciduous forests; bear in almost all forests; the musk deer in the higher Himalayas and so on. Of the reptiles, crocodiles are found in most rivers but their number has gone down as their skin is much sought after. Various kinds of snakes, king cobra, krait, pythons etc., are found in most of the warm forests. As for bird life, India possesses one of the richest avifauna. Out of the total number of different kinds of birds known to inhabit the earth, about one-tenth occur in this country. Many birds are of economic importance, some are excellent songsters; others have beautiful plumage, or are game birds. The peacock with its resplendent feathers is India's national bird.

7.4. The fact that this rich heritage has come down to us through ages is in a large measure due to the deep-rooted Indian tradition of ahimsa and compassion for all living beings in general. This tradition can be traced back to the Vedic age. The forest-retreats of ancient sages were not only seats of learning but were also sanctuaries of birds and animals.

7.5. Although the recorded evidence of the State of wild life during the early middle ages is scanty, there was no dearth of wild animals at the advent of the Mughal period early in the 16th century. A majority of the Mughal rulers were great lovers of nature and displayed keen interest in wild life. Being fond of *shikar* or hunting, they had declared as 'protected' the entire region covering the upper valley of the Indus and the area westward of the Ganges and southwards upto the Narbada river. Although the Mughal concept of conservation and management of wild life was essentially that of the 'chase', their hunting reserves were fully protected.

7.6. During the 19th century, with the ushering in of an era of comparative peace and settled conditions of life, the demand for land for agriculture increased and many forests, the natural homes of wild life, were cleared for cultivation. The resultant decline in wild life was further accentuated during the early years of the 20th century due largely to an increase in the number of firearms and the appearance of fast-moving mechanized vehicles. Many species were driven to the verge of extinction, *e.g.* the Asiatic Lion and the Great Indian One-horned Rhinoceros, while some actually became extinct *e.g.*, the Cheetah or hunting leopard. The Second World War further added to the depletion of wild life as a large number of troops were given training in hitherto inaccessible forest areas.

7.7. With the indiscriminate killing that took place towards the end of the 19th century and the imminent disappearance of some of the larger animals, sporadic attempts were made in the early years of the

present century to preserve individual species. The Asiatic Lion which was reduced to a very small number, was protected in the erstwhile State of Junagadh (in the present Gujarat State). A sanctuary was created for the Indian Rhinoceros in Assam. A special Act was brought into force for the protection of the Elephant. The continued existence of these species today is due to these early but timely efforts.

7.8. In 1887, an Act for the preservation of wild birds and animals came into force. This was followed by a similar Act in 1912, but both were ineffective. In the Reserved Forests, however, wild life received a fair degree of protection under the provisions of the Indian Forest Act. In 1935, through the efforts of some wild life enthusiasts, Government of India held a conference on wild life which resulted in some concrete measures for the protection of wild life. A number of sanctuaries for wild life were established in some of the States during this period *e.g.*, Corbett National Park in U.P., Taroba and Kanha in Madhya Pradesh (both are now National Parks) Mudumalai in Madras, etc.

7.9. Immediately after independence the pressing problem of diverting more land to food production led to further clearing of vast forest areas with disastrous assault on wild life. Farmers in these newly cleared areas were provided with weapons for crop-protection but these were more often than not indiscriminately used. The result was that wild life disappeared in many areas where it was once abundant.

### B. Indian Board for Wild Life

7.10. The National Forest Policy enunciated in 1952 emphasized the need for affording protection to the animal kingdom and particularly to rare species such as the lion and the great one-horned rhinoceros which were fast disappearing from the Indian scene. It was stated that while the damage caused by such predators as wild pigs, game, porcupine could not be denied, the elimination of their natural enemies tended to multiply them. It was, therefore, considered necessary that bird and animal life should be controlled by special laws and rare fauna preserved by setting up sanctuaries and large scale national parks. With this object in view, the Government of India constituted in 1952 the Indian Board for Wild Life (*vide* Ministry of Food and Agriculture, Government of India Resolution No. 7-110/51-F, dated the 4th April, 1952). With a view to make it more broad-based, the Board was reconstituted in 1962 (Ministry of Food and Agriculture, Government of India Resolution No. 10-39/61-F.II, dated the 15th October, 1962 as amended by No. 9-58/62-F.II, dated the 20th November, 1963 and No. 9-15|64-F.II, dated the 20th July, 1964, *vide* Appendix V).

*Composition*

7.11. The Board consists of both officials and non-officials. The Chairman is a non-official nominated by the Government of India. Union Minister of State for Agriculture is Pro-Chairman. Among non-official members are representatives of various bodies concerned with and interested in wild life conservation, two members from Lok Sabha, one member from Rajya Sabha and eminent naturalists and wild life enthusiasts. Official members include, besides Inspector General of Forests, representatives of Union Ministry of Commerce, Zoological Survey of India & Botanical Survey of India, the Director General of Tourism, and one representative each of the Forest Departments of the States|Union Territories. A list of the present Board is at Appendix VI.

*Duration of membership*

7.12. The term of membership of the Board is for a period of four years. But those members of the Board who are members by virtue of some office or appointment held by them continue to be members as long as they hold such office or appointment. The term of M.Ps. on the Board expires on their ceasing to be a Member of Parliament or with the dissolution of Lok Sabha if he is a member of that House. The membership of the Board is to cease also in the event of other usual happenings like death, resignation, insolvency, having become of unsound mind and conviction by a court of law of a criminal offence involving moral turpitude.

*Functions*

7.13. The functions of the Board are:—

(i) to advise the Central and State Governments on the ways and means of conservation and control of wild life through coordinated legislative and practical measures with particular reference to seasonal and regional closure, and the declaration of certain species of animals as protected animals and the prevention of indiscriminate killing;

(ii) to sponsor the setting up of national parks, sanctuaries and zoological gardens;

(iii) to promote public interest in wild life and the need for its preservation in harmony with natural and human environment;

(iv) to advise the Government on the policy regarding export of living animals, trophies, skins, furs, feathers and other products of wild life;

(v) to assist and encourage the formation of wild life societies and to act as a Central Co-ordinating agency for all such bodies;

(vi) to review from time to time the progress in the field of wild life conservation in the country and suggest such measures for improvement as are considered necessary;

(vii) to perform such other functions as are germane to the purposes for which the Board is constituted;

(viii) to advise the Central and State Governments concerned on any point referred to it by them provided the subject matter of the reference falls within the prescribed functions of the Board;

(ix) to carry on propaganda for the promotion of the objectives herein before mentioned;

(x) to collect statistics in respect of the wild life population of the country and other matters referred to above;

(xi) to establish and maintain research and reference liberaries and reading rooms;

(xii) to do all such other things either alone or in conjunction with others or on the direction of the Government of India, which the Board may consider necessary, advisable or conducive to the preservation and conservation of wild life or for the other similar purposes for which it is constituted including those mentioned herein.

7.14. For purposes of coordination, the country is divided into four regions, *viz.*, (i) Eastern Region—comprising the States of Assam, Bihar, Orissa and West Bengal and Union Territories of Manipur, Tripura and Nagaland, N.E.F.A., (ii) Southern Region—comprising the State of Andhra Pradesh, Kerala, Madras and Mysore and Union Territories of Andaman and Nicobar Islands and Pondicherry, (iii) Western Region—comprising the States of Maharashtra, Rajasthan, Madhya Pradesh and Gujarat, (iv) Northern Region—comprising of the States of Punjab, Jammu and Kashmir and Uttar Pradesh and Union Territories of Himachal Pradesh and Delhi. One honorary Secretary is nominated by the Government of India to represent each region in the Indian Board for Wild Life.

*Meetings*

7.15. Ordinarily, the Board is to meet once in two years. So far the Board has held six meetings. The details regarding date and place of these meetings, number of members present, etc. are given below:—

| Meeting | Date | Place | Total membership. | Members present | State/U.T. representatives | Representatives of States/U.Ts. present |
|---|---|---|---|---|---|---|
| 1. First | 25-11-52 to 1-12-52 | Mysore | 44 | 23 | 30 | 8 |
| 2. Second | 2-2-55 to 4-2-55 | Calcutta | 48 | 31 | 29 | 11 |
| 3. Third | 14-2-58 to 16-2-58 | New Delhi | 40 | 33 | 21 | 10 |
| 4. Fourth | 5-2-61 to 8-2-61 | Ootacamund | Information not available. | | | |
| 5. Fifth | 10-2-63 to 12-2-63 | Mysore | | | | |
| 6. Sixth | 3-6-65 to 5-6-65 | Dhikala (U.P.) | 64 | 30 | 23 | 13 |

*Executive Committee/Standing Committee*

7.16. The Board at its first meeting decided to constitute an Executive Committee consisting of non-official vice-Chairman of the Board, as its Chairman and Regional Secretaries, Secretary General and the Secretary of the Board as members to take action on the decisions of the Board. The Executive Committee was to meet at least once in six months. With the reconstitution of the Board, the Executive Committee was also reconstituted on the 22nd April, 1964 and re-named as Standing Committee. According to the revised constitution, the Chairman, Pro-Chairman, and two Vice-Chairman of the Board are also respectively the Chairman, Pro-Chairman and Vice-Chairman of the Standing Committe. Besides, there are other 18 members on the Committee (Appendix VII).

The functions of the Standing Committee are:—

(i) to assess the progress made in the implementation of the recommendations of the Board;

(ii) to consider and tender advice on any difficulties experienced by the State Governments|Union Territories in the implementation of recommendations of the Board;

(iii) to appoint special committee as may be found necessary for any of the above purpose or for studying any connected questions;

(iv) generally to assist in the fulfilment of the functions of the Board.

7.17. The Standing Committee is to meet ordinarily twice between two sessions of the Board. So far, following meetings have been held by the Executive|Standing Committee:—

*Executive Committee*

| No. of meeting | Date | Place |
|---|---|---|
| 1. First . . . . | 29-10-53 to 2-11-53 | Kanha Sanctuary (M.P.) |
| 2. Second . . . . | 31-1-55 to 1-2-55 | Calcutta |
| 3. Third . . . . | 6-5-55 to 9-5-55 | Ootacammund |
| 4. Fourth . . . . | 18-1-56 to 20-1-56 | Sasan Gir (Gujarat) |
| 5. Fifth . . . . | 21-1-57 to 23-1-57 | Periyar (Kerala) |
| 6. Sixth . | 14-1-59 to 15-1-59 | Shivpuri (Madhya Pradesh) |
| 7. Seventh . . | 7-8-62 | New Delhi |
| (*Standing Committee*) | | |
| 1. First . . . . | 18/29-8-64 | New Delhi |
| 2. Special (with the International Union for Conservation of Nature and Nature Resources Delegation) | 24-11-65 | New Delhi |

7.18. Information regarding the number of members present at each of the above meetings, except the special meeting, is not available with the Ministry. At the special meeting, about 86 per cent of the members are said to have attended the meeting.

7.19. Besides the Standing Commitee, there are other three Sub-Committees, *viz.* Zoo Wing, Bird Wing and the Publications Sub-Committee to assist the Board. While the Zoo Wing is to meet annually, the Bird Wing meeting is to be held concurrently with or consecutive to the meetings of the Standing Committee. The meeting of Publications Sub-Committee is to be held, if necessary, only when there is a meeting of the Board or of the Standing Committee.

7.20. So far Zoo Wing has held one meeting at Mysore on 15th and 16th May, 1956. The Bird Wing has held three meetings—first at Calcutta on 31st January, 1955 and Second and Third at Bombay and New Delhi on 14|15th March, 1956 and 15th February, 1958, respectively. No meeting of the Publications Sub-Committee has been held so far. Information regarding the members present at the meetings of the Zoo Wing or Bird Wing are also not available with the Ministry.

*Secretarial assistance to Board.*

7.21. Secretarial work of the Indian Board for Wild Life is handled by the Forestly Wing of the Ministry of Food and Agriculture. The Board at its last meeting held in June, 1965, recommended that a separate division should be established in the Ministry with a whole time officer-in-charge to deal with matters relating to Wild Life. It is understood that recently about six months back a Wild Life Cell in the Forestry Wing consisting of an Assistant Inspector General of Forests and a Technical Assistant has been sanctioned. It is further understood that the Assistant Inspector General of Forests has joined only in the month of January this year.

**7.22. The Committee note that the meetings of the Board are not held according to prescribed schedule. As provided in the constitution of the Board, it is required to meet once in two years and accordingly since its inception in 1952 at least eight meetings should have been held uptill now. But so far only six meetings have been held. Even the first meeting was held after the expiry of a period of about seven months of the constitution of the Board. The sixth meeting which the Board held last was in June, 1965. It has not yet been possible for the Board to meet since.**

**While the record of meetings of the Board is poor, that of the erstwhile Executive and the Standing Committee is no better. Since its in-**

ception it is supposed to have met at least 18 times, actually it has held 9 meetings so far. Except the 3rd, 4th & 5th meetings of the Executive Committtee, all others have been held after a gap of 2 to 3 years.

The Committee are surprised that no information as to the attendance of members at the Fourth and Fifth meetings of the Board and at all the meetings of the Executive/Standing Committee and the two Sub-Committees, viz. Bird Wing and Zoo Wing is available with the Ministry. The attendance at the four meetings of the Board for which the Ministry have been able to furnish information is not very encouraging either. In particular, the attendance of the representatives of the States/Union Territories as compared to their total membership has been extremely poor.

The Committee cannot help feeling that there is lack of planning in convening the meetings of the Board and the Standing Committee. They fail to understand how in these circumstances it is possible for the Standing Committee to discharge the vital function of watching the implementation of the recommendations made by the Board.

Unsatisfactory as has been the performance of the Board and the Standing Committee in the matter of holding meetings, that of the three Sub-Committees, viz. Zoo Wing, Bird Wing, and Publications Sub-Committee has been worse still. Instead of having had 17 meetings each to its credit, the Zoo Wing, has met only once and the Bird Wing only thrice. The Publications Sub-Committee has not even met once. All this indicates that there is lack of purpose behind the whole scheme of the Board and its various Committees or absence of will on the part of the Board to achieve the objective set down for it.

The Committee are inclined to think that such a situation has arisen for want of an efficient Secretariat with the Board. They are glad to be informed that a Wild Life Cell has recently been set up in the Forestry Wing with an Assistant Inspector General of Forests at its head. The Committee recommend that this Cell may be strengthened suitably so that the working of Indian Board for Wild Life is put on a regular and sound footing.

*Activities of the Board*

7.23. The Committee have been informed that as a result of the recommendations of the Board following important steps were taken for the conservation and management of wild life in the country:—

(i) *State Wild Life Boards.*—Except Orissa, West Bengal, Pondicherry, Andaman and Nicobar Islands, and Goa, Daman and

Diu, all the States|Uni Territories have set up a Wild Life Board. The State Boards work within the framework of the general policy laid down by the Indian Board for Wild Life. Adequate liaison is maintained between the State Board and the Indian Board for Wild Life through the regional secretaries and the Chief Conservators of Forests who are members of the Board.

(ii) *National Parks and Sanctuaries.*—So far, 4 National Parks and over a hundred sanctuaries have been created (List in Appendix VII). Organisation and management of these National parks and game sanctuaries have been put on modern scientific lines.

(iii) *Wild Life Legislation.*—On the lines of a model legislation prepared and circulated by the Board all the States and Union Territories except Orissa and Tripura, have enacted necessary legislation for the protection and preservation of wild animals and birds. The Governments of Orissa have informed that they have drafted a comprehensive set of rules for protection of wild animals and birds which is under scrutiny at present.

(iv) *Protection of rare and vanishing birds and animals.*—About 40 species of animals and birds (listed in Appendix IX) have been declased as protected. Chief among the protected species are brown Antlered Deer, Nilgiri Tahar, Mishmi Takin, Crocodiles, Great Indian Bustard, the Peacock and the Golden Eagle.

(v) *Wild Life Census and Ecological investigation.*—At the instance of the Board, recently the census of wild asses and Indian lions have been undertaken.

(vi) *Export of Wild animals and birds.*—The board recommends from time to time the policy to be adopted regarding the export of wild animals and birds keeping in view the population of various species.

(vii) *Education and Publicity.*—In order to educate the general public about the importance of Wild Life conservation, the first week of October every year is celebrated as Wild Life week on a national scale. During this week, visits to zoos, national parks, and wild life sanctuaries are organised and publicity is given to the cause of wild life through various publicity media.

**7.24. The Committee are not at all happy at the achievements of the Board during the seventeen years of its existence. Despite what little the Board has been able to do, alarming complaints and reports continue to be heard from knowledgeable persons including Wild Life experts from foreign countries that Wild Life in India is in grave danger of extinction.**

**The Committee are concerned to note that a number of recommendations made by the Board are yet to be implemented by some of the States. Although the Board at their first session in 1952 commended to each State to set up a State Wild Life Board, yet such Boards have not so far come into existence in two States and three Union Territories. Orissa and the Union Territory of Tripura have yet to have a wild life legislation as advised by the Board. The Committee regret that despite repeated resolutions of the Board problems such as effective control on poaching, commercial transactions in game meat, use of crop protection guns, protection to wild life in areas outside reserved forests etc. still await their solution. The Committee are not also satisfied with the publicity measures so far taken to educate the public about wild life. They are convinced that there is urgent need to activize and revitalize the Board and its various Committees by a thorough overhauling of its existing administrative set-up.**

## C. Conservation and Management

7.25. The conservation and management of wild life received specific and greater attention during the Second Five Year Plan period and thereafter. In the Second Plan, it was emphasized, "the conservation of wild life is an integral part of forest management, especially in view of the imperative need for protecting India's rich heritage of wild life, which is now finding its last refuge within the limits of the reserved forests of the country. Such notable animals as the lion and the rhinoceros are in danger of extinction". In order to serve the cause of wild life. the forestry programmes in the Second Plan included the establishment of 18 national parks and game sanctuaries, besides a modern zoological park in Delhi. In the Third Plan also, the importance of protection and proper management of indigenous flora and fauna was recognised and the programme included development and establishment of 5 zoological parks, 5 national parks, and 10 wild life sanctuaries, in addition to further development of Delhi Zoological Park as a Central Scheme.

7.26. The total amount spent on nature conservation schemes in the Central and State Sector during the Second and Third Plan period and during 1966-67 and 1967-68 is as indicated below:—

| | Central Sector | State Sector |
|---|---|---|
| | (Rs. in lakhs) | |
| (i) Second Plan . . . . | 56·20 | 23·39 |
| (ii) ThirtPlan | 34·60 | 174·27 |
| (iii) 1966-67 . . . . . | 0·80 | 32·82 |
| (iv) 1967-68 . . . . . | 2·05 | 46·82 |

7.27. As already stated above, various measures in pursuance of the recommendations made by the Indian Board for Wild Life from time to time, have been taken in the past for the conservation and proper management of wild life in the country. The question of a review of the measures recommended by the Board and their implementation by the States|Union Territories all these years, and divising ways and means of making the Board a more effective organisation in view of the seriously deteriorating wild life situation throughout the country was considered by the Standing Committee at its meeting held in August, 1964. The Commitee *inter alia* recommended as under:—

> "The Committee recognised the necessity of a more vigorous and sustained follow up action on various resolutions passed by the Indian Board for wild life and recommended that steps be taken to find out how far the earlier resolutions of the Board were being implemented.".

7.28. The Committee understand that the Planning Commission also arranged a meeting on 23rd April, 1965 to discuss the question of preservation of wild life. The meeting was held under the Chairmanship of the Union Minister of Food and Agriculture and was, among others, attended by the Member (Natural Resources), Planning Commission, Inspector General of Forests, representatives of the Union Ministries of Food & Agriculture, Railways, Commerce and Transport and Communications (Department of Tourism) and Chief Conservators of States| Union Territories. Member, Planning Commission, is understood to have pointed out at the meeting that 'despite all the efforts

of the Forest Departments of the country and the work done by the Indian Board for Wild Life complaints are still being received that the wild life is not being adequately protected and certain species have already disappeared and others have diminished considerably and are on the verge of extinction. The following recommendations were made by the meeting:—

(1) *Funds.*—Adequate funds be made available in Fourth Plan for effective conservatiion of wild life including such aspects as protection, management, preservation, development of sanctuaries, national parks and breeding farms, collection of information, education, publicity, survey etc. To give impetus to the programme the scheme should be centrally sponsored.

(2) *Policy on matters of all-India interests.*—Policy decisions be taken on matters of all-India concern such as (i) uniform legislation; (ii) export of wild life and wild life products; (iii) issue of gun licences, restriction on manufacture, import and sale of certain types of ammunition; (iv) problems concerning tribal and rural welfare *vis-a-vis* wild life preservation in and near the forests; and (v) patterns for sanctuaries and national parks. Ministry may prepare and forward to the National Development Council of the Planning Commission, and where necessary to the Cabinet, memoranda on these matters with a view to obtaining directives.

(3) *Administrative set-up.*—(a) A separaate Wild Life Division be constituted in the Ministry of Food & Agriculture with a whole-time officer assisted by necessary technical and administrative staff. Likewise in the State Forest Departments a Wild Life Circle be created. (b) The Standing Committee of the Board be reconstituted into a smaller body consisting of persons who can be readily available for a meeting at least once every two months. The Committee should function also as a Technical Advisory Committee to the proposed Wild Life Division.

(4) *Education and publicity.*—(a) The Publications Sub-Committee of the Board should prepare a comprehensive statement covering all aspects of information, public education and training concerning wild life conservation, and incorporating also matters that have been raised from time to time

and also the memoranda placed before the Committee. (b) An expert scientific inventory of India's wild life resources, including national parks, sanctuaries and equivalent reserves be made by competent ecologists.

7.29. The above recommendations of the Committee of the Planning Commission have been considered by the Indian Board for Wild Life at its last meeting held in June, 1965. While taking note of the recommendations made, the Board has recommended (a) schemes in the Fourth Plan to be Centrally-sponsored, (b) creation of separate Division in the Central Ministry, and (c) the question of setting up a technical advisory Commitee to the proposed Division to be decided by the Ministry.

7.30. The Committee need hardly emphasize that a nation's fauna is as important as its flora. It is part of nature's treasure and even where it does not provide food or skin or some other produce of direct economic value, it adds to the scenic beauty of the countryside and to the joy of life. There is a large variety of fauna that is peculiar to this country and Indian myth and legend teem with animal love. In this context, the Committee feel that a lot is left to be desired in the field of conservation and management of wild life in the country. They are accordingly inclined to agree with most of the recommendations made at the Planning Commission meeting held on the 23rd April, 1965, more particularly the one regarding the reorganisation of the administrative set-up of the Board. The Committee recommend that immediate steps be taken to appoint an *ad hoc* Committee to review the progress so far made towards the protection and preservation of wild life and suggest measures to improve the working of the Board so as to make it an effective body. The Reviewing Committee may, *inter alia* go into the following matters:—

(i) enunciation of a well-defined wild life policy;

(ii) organisational set up to render assistance to be Board;

(iii) review of the list of protected species;

(iv) effectiveness of existing wild life laws;

(v) pattern of national parks and sanctuaries;

(vi) facilities to be created for higher level education in wild life management;

(vii) facilities for promotion of wild life tourism.

*Census of Wild Life*

7.31. The Committee have been informed that a Census has been carried out for a few species like lions, rhinos and in some places elephants. However, no census as such has been carried out for wild life.

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7.32. In reply to a question, it has been stated that the total number of lions as revealed by the recent census is 177. The census has been conducted by employing 'direct count method' which is considered more accurate than the 'indirect count method' employed in the previous censuses. According to previous census in 1963, the total number of lions was 285.

7.33. In reply to a further question, it has been stated that the Committee appointed by the Government of Gujarat to go in to the reasons for the decrease in the number of lions has not submitted their report yet.

**7.34. The Committee find that nothing has yet been done in regard to ecological survey of wild life and necessary research on the subject, even though this happens to be one of the important functions of the Board. They learn that so far census has been undertaken only in respect of a few species like Gir lions, rhinos and in some places of the elephants, by the States concerned. The Committee are of the opinion that a census of other species of wild life, whose population is considered to be diminishing, should be undertaken urgently so as to initiate effective measures for their protection. They feel that a phased programme in this regard should be drawn up and its execution undertaken by the Centre, instead of leaving it to the States.**

## D. Wild Life & Tourism

7.35. The Committee understand that the Department of Tourism is considering the following two proposals for the promotion of Shikar Tourism:—

(i) Appointment of a National Committee to suggest ways and means of how best Wild Life could be preseved and facilities granted for Shikar Tourism;

(ii) Constitution of a National Conservation Service as distinct from the Forest Departments so that preservation of Wild Life on a national scale could be done by one authority.

7.36. The reaction of the Ministry of Food, Agriculture,, Community Development and Cooperation (Department of Agriculture) in regard to the above proposals, as communicated to the Committee, is as follows:—

"The Department of Tourism of late has been considering the appoint of such a Committee. They wrote to this Ministry in the month of December, 1967, that they would themselves strongly recommend to us the constitution of a High Level Committee, under the Chairmanship of the Inspector General of Forests to go into the subject of Wild Life Conservation and to make recommendations to the Governments. The Department of Tourism was informed by this Ministry that wild life was a state subject and the recommendation of any Committee set up by the Government of India would at best be recomendatory to the State Governments. The Indian Board for Wild Life had been dealing with the question of Wild Life Preservation and Conservation in the country for the last 15 years and had made several recommendations to the State Governments on the subject. The Board consists of Chief Conservator of Forests of the States, Wild Life Enthusiasts as well as Members of Parliament etc. The pro-Chairman of the Board is the Union Minister of State for Agriculture. The matter will be discussed at the next meeting of the Indian Board for Wild Life. In our opinion the appointment of another Committee and creation of National Conservation Service would amount to duplication of work."

7.37. The Government of Tourism was asked as to whether the Indian Board for Wild Life was not considered appropriate to look after the preservation of Wild Life on a national scale. It has been pointed out by them that the effectiveness of the Indian Board for Wild Life is limited—firstly because its meetings are irregular (it has not met since June, 1965) and secondly most of its recommendtions have not been implemented.

7.38. Asked during evidence in connection with the examination of estimates relating to Ministry of Tourism and Civil Aviation—Department of Tourism, as to what precisely was required to be done by the proposed National Committee, the Director General of Tourism stated as under:—

"The problem basically has been that the Indian Board for Wild Life seems to have been lost in the overall tremendous responsibility of the Ministry of Food and Agriculture. The Wild Life Board has not met since June, 1965. At the Tourist Development Council there was grave concern expressed that Wild Life was disappearing irrespective of the undoubtedly outstanding work done by the Wild Life Board. The Tourist

Development Council, therefore, expressed the view that a high level group should be set up to find out what was going wrong and why, despite this high level body and despite the professed keen interest in preservation of wild life. ....If we do not do something ourselves about it, the thing is going to disappear simply because nobody else is doing something about it....And Wild Life has a vital significance to tourism."

7.39. As regards the creation of a separate Service, the Director General of Tourism further stated as follows:—

"....The forest service which is predominantly concerned with trees and exploitation of the forest wealth of the country, although they have a very distinguished Wild Life experts, are not specially equipped to deal with the problems of Wild Life. Our country is so rich in flora and fauna that we, as a country, must consider the desirability of setting up a specialists service dedicated only to the preservation of Wild Life as is done in a large number of other countries, who value their own Wild Life."

7.40. In reply to a question whether the establishment of a separate Service would help the cause of Wild Life or whether something else was required, the representative of the Ministry of Food and Agriculture stated as under:—

"Specialised training programme on Wild Life has been included in the training of the forest personnel for quite a few years now. I think, we should give them a fair chance to associate themselves more freely with this approach towards Wild Life. It is mainly the responsibility of the States...."

7.41. In reply to another question, the representative of the Ministry of Food and Agriculture indicated that the time was not yet ripe for bifurcation of the existing forest service, which in his opinion might segregate into a separate Service in course of time when the importance gained sufficient momentum.

7.42. Asked what were the prospects of attracting foreign tourists by developing Wild Life and game sanctuaries, the Director General of Tourism informed the Committee that it was very substantial. He, however, added that it was limited to the extent of the availability of adequate accommodation in the various sanctuaries. There was also difference of opinion between the Tourist Department and the Forest authorities on the question of the extent to which human beings could be allowed into sanctuaries. The Forest Departments had, however, no objection to entry of non-shooters into the game sanctuaries as such.

7.43. The great variety of Wold Life existing in the country can greatly help in attracting foreign tourists and thereby promoting the cause of tourism in the country. Wild Life sanctuaries can be developed for attracting destinational traffic. The Committee regret to note that the main difficulty in this regard is stated to be limitation of transportation facilities to the sanctuaries, lack of adequate accommodation and professional experience to identify animals and birds. The Committee note that the Department of Tourism is considering the question of appointing a National Committee and the constitution of a National Conservation Service for the preservation of Wild Life and developing facilities for Wild Life tourism. They feel that had the Board for Wild Life and its Standing Committee and Sub-Committee been active, such a proposal would not have been mooted by the Department of Tourism. In the opinion of the Committee the appointment of another Committee or the creation of a separate service for Wild Life would not solve the problem, it may rather lead to duplication and overlapping. What is needed is a determined effort to make the Board for Wild Life an effective instrument for the conservation and preservation of Wild Life in the country and training forest service personnel in Wild Life and making them specifically responsible for their conservation in Sanctuaries and National Parks.

7.44. The Committee further suggest that a programme for the development of National Parks and Sanctuaries and creation of facilities to attract foreign tourists should be worked out in closer coordination and consultation with the Department of Tourism which can also assist in the development of rest houses and roads in the Sanctuaries.

The Committee have already recommended the appointment of an *ad hoc* Committee to review the working of the Board for Wild Life. They recommend that this aspect should also be considered by that Committee.

P. VENKATASUBBAIAH,
*Chairman,*
*Estimates Committee.*

NEW DELHI:
*March* 28, 1969
*Chaitra* 7, 1891 *(Saka)*

## APPENDIX I

### OLD FOREST POLICY, 1894.

(Vide *para* 1.12 *of the Report*)

(Extract taken from pp. 155-162 of F. D. Code, 6th Edn.)

### CIRCULAR NO. 22-F., DATED 19TH OCTOBER 1894.

read—

Circular Resolution of this Department, No. 17-105A., dated 15th July 1891.

Chapters VIII and IX of Dr. Voelcker's Report on the Improvement of Indian Agriculture.

Review of Forest Administration in British India for 1892-93 by the Inspector-General of Forests.

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Resolution.—In Chapter VIII of his report on the improvement of Indian Agriculture, Dr. Voelcker dwells at length upon the importance of so directing the policy of the Forest Department that it shall serve agricultural interests more directly than at present; and in his Review of Forest Administration for 1892-93 the Inspector-General of Forests discusses in some detail the principles which should underlie the management of State forests in British India. While agreeing, generally, with the principles thus enunciated by the Inspector-General of Forests, the Government of India think that it will be convenient to state here the general policy which they desire should be followed in this matter more especially as they are of opinion that an imperfect apprehension of that policy has, in some recent instances, been manifested.

2. The sole object with which State forests are administered is the public benefit. In some cases the public to be benefited are the whole body of tax-payers; in others, the people of the tract within which the forest is situated; but in almost all cases the constitution and preservation of a forest involve, in greater or less degree, the regulation of rights and the restriction of privileges of user in the forest area which may have previously been enjoyed by the inhabitants of its immediate neighbourhood. This regulation and restriction are justified only when the advantage to be gained by the public is great; and the cardinal principle to be observed is that the rights and privileges of individuals must be limited, otherwise than for their own benefit, only in such degree as is absolutely necessary to secure that advantage.

3. The forests of India, being State property, may be broadly classed under the following headings:—

(a) Forests the preservation of which is essential on climatic or physical grounds.

(b) Forests which afford a supply of valuable timbers for commercial purposes.

(c) Minor forests.

(d) Pasture lands.

It is not intended that any attempt should be made to class existing State forests under one or other of these four heads. Some forests may occupy intermediate positions, and parts of one and the same forest may fall under different heads. The classification is useful only as affording a basis for the indication of the broad policy which should govern the treatment of each class, respectively; and, in applying the general policy, the fullest consideration must be given to local circumstances.

4. The first class of forests are generally situated on hill slopes, where the preservation of such vegetation as exists, or the encouragement of further growth, is essential to the protection from the devastating action of hill torrents on the cultivated plains that lie below them. Here the interests to be protected are important beyond all comparison with the interests which it may be necessary to restrict; and, so long as there is a reasonable hope of the restriction being effectual, the lesser interests must not be allowed to stand in the way.

5. The second class of State forests include the great tracts from which our supply of the more valuable timbers—teak, sal, deodar and the like—is obtained. They are for the most part (though not always) essentially forest tracts, and encumbered by very limited rights of user; and, when this is the case, they should be managed mainly on commercial lines as valuable properties of, and sources of revenue to, the State. Even in these cases, however, customs of user will for the most part have sprung up on the margins of the forest; this user is often essential to the prosperity of the people who have enjoyed it; and the fact that its extent is limited in comparison with the area under forest renders it the more easy to continue it in full. The needs of communities dwelling on the margins of forest tracts consist mainly in small timber for building, wood for fuel, leaves for manure and for fodder, thorns for fencing, grass and grazing for their cattle and edible forest products for their own consumption. Every reasonable facility should be afforded to the people concerned for the full and easy satisfaction of these needs, if not free (as may be possible where a system of regular cuttings has been established), then at low

and not at competitive rates. It should be distinctly understood that considerations of forest income are to be subordinated to that satisfaction.

There is reason to believe that the area which is suitable to the growth of valuable timber has been over-estimated, and that some of the tracts which have been reserved for this purpose might have been managed with greater profit both to the public and to the State, if the efforts of the Forest Department had been directed to supplying the large demand of the agricultural and general population for small timber, rather than the limited demand for merchants for large timber. Even in tracts of which the conditions are suited to the growth of large timber it should be carefully considered in each case whether it would not be better, both in the interests of the people and of the revenue, to work them with the object of supplying the requirements of the general, and in particular of the agricultural, population.

6. It should also be remembered that, subject to certain conditions to be referred to presently, the claims of cultivation are stronger than the claims of forest preservation. The pressure of the population upon the soil is one of the greatest difficulties that India has to face, and that application of the soil must generally be preferred which will support the largest numbers in proportion to the area. Accordingly, wherever an effective demand for culturable land exists and can only be supplied from forest areas, the land should ordinarily be relinquished without hesitation; and if this principle applies to the valuable class of forests under consideration, it applies *a fortiori to* the less valuable classes which are presently to be discussed. When cultivation has been established, it will generally be advisable to disforest the newly-settled area. But it should be distinctly understood that there is nothing in the Forest Act, or in any rules or orders now in force, which limits the discretion of Local Governments, without previous reference to the Government of India (though, of course, always subject to the control of that Government) in diverting forest land to agricultural purposes even though that land may have been declared reserved forest under the Act.

7. Mention has been made of certain conditions to which the application of the principle laid down in the preceding paragraph should be subject. They have for their object the utilisation of the forest area to the greatest good of the community. In the first place, the honey-combing of a valuable forest by patches of cultivation should not be allowed; as the only object it can serve is to substitute somewhat better land in patches for sufficiently good land in large blocks, while it renders the proper preservation of the remaining forest area almost impossible. The evil here is greater than the good. In the second place the cultivation must be permanent. Where the physical conditions are such that the removal of the protection afforded by forest growth must result, after a longer or shorter

period, in the sterilization or destruction of the soil, the case falls under the principle discussed in paragraph 4 of this Resolution. So, again, a system of shifting cultivation, which denudes a large area of forest growth in order to place a small area under crops, costs more to the community than it is worth, and can only be permitted, under due regulation, where forest tribes depend on it for their sentence. In the third place, the cultivation in question must not be merely nominal, and an excuse for the creation of pastoral or semi-pastoral villages, which do more harm to the forest than the good they reap from it. And, in the fourth place, cultivation must not be allowed so to extend as to encroach upon the minimum area of forest which is needed in order to supply the general forest needs of the country, or the reasonable forest requirements, present and prospective, of the neighbourhood in which it is situated. In many tracts cultivation is practically impossible without the assistance of forests, and it must not be allowed to destroy that upon which its existence depends.

8. It has been stated above that the forests under consideration are generally, but not always, free from customs of user. When, as sometimes happens, they are so intermingled with permanent villages and cultivation that customary rights and privileges militate against their management as revenue-paying properties, the principles laid down at the end of paragraph 5 of this Resolution should be observed, and considerations of income should be made secondary to the full satisfaction of local needs. Such restrictions as may be necessary for the preservation of the forest, or for the better enjoyment of its benefits, should be imposed; but no restriction should be placed upon reasonable local demands, merely in order to increase the State revenues.

9. The third class of forests include those tracts which, though true forests, produce only the inferior sorts of timber, or the smaller growths of the better sorts. In some cases the supply of fuel for manufactures, railways, and like purposes, is of such importance that these forests fall more properly under the second class, and must be mainly managed as commercial undertakings. But the forests now to be considered are those which are useful chiefly as supplying fuel and fodder or grazing for local consumption; and these must be managed mainly in the interests of the population of the tract which supplied its forest requirements from this source. The first object to be aimed at is to preserve the wood and grass from destruction; for user must not be exercised so as to annihilate its subject, and the people must be protected against their own improvidence. The second object should be to supply the produce of the forests to the greatest advantage and convenience of the people. To these two objects all considerations of revenue should ordinarily be subordinated.

10. It must not be supposed from the preceding remarks that it is the intention of the Government of India to forego all revenue from the large areas that are valuable chiefly for the fuel and fodder which they yield. Cases must be distinguished. Where the areas in question afford the only grazing and the only supply of fuel to villages which lie around or within them, the necessities of the inhabitants of these villages must be treated as paramount, and they should be satisfied at the most moderate rates and with as little direct official interference as possible. But where the villages of the tract have already ample pasture grounds attached to their cultivation and owned and managed by themselves and where the Crown lands merely supplement these pastures, and afford grazing to a nomad pastoral population, or to the herds that shift from one portion of the country to another with the changes of the season, Government may justly expect to reap a fair income from its property. Even in such cases, however, the convenience and advantage of the graziers should be studiously considered, and the inhabitants of the locality, or those who habitually graze over it, should have a preferential claim at rates materially lower than might be obtained in the open market. It will often be advantageous to fix the grazing demand upon a village or a nomad community for a year or a term of years. The system, like every other, has difficulties that are peculiar to it; but it reduces the interference of petty officials to the lowest point, and minimizes their opportunities for extortion and oppression. Where grazing fees are levied *per capita,* free passes are often given to a certain number of cattle. In such cases the cattle which are to graze free should include, not only the oxen which are actually employed on the plough, but also a reasonable number of milch cattle and calves. A cow or a buffalo is as much a necessity to a cultivator using the word necessity in a reasonably wide sense, as is a plough-bullock; and in many parts the oxen are bred in the village.

11. In the portions of his report which are referred to in the preamble to this Resolution Dr. Voeloker strongly recommends the formation of fuel and fodder preserves, and the Government of India have repeatedly urged the same policy upon Local Governments. The question whether any particular area can be made to support a greater number of cattle by preserving the grass and cutting it for fodder, or by permitting grazing upon it is one that must be decided by the local circumstances of each case. But when it has been decided, the issues are by no means exhausted. It has been stated in para 9 above that one main object towards which the management of these minor forests should be directed is, the supply of fuel and fodder "to the greatest advantage and convenience of the people." In doing so, due regard must be had to their habits and wishes. It may be that strict preservation and periodical closures, or the total prohibition of grazing, will result in the largest yield both of fuel and fodder in the form of hay. But that is of small avail if the people will not utilize

the increased supply in the form in which it is offered to them. The customs of generations alter slowly in India; and though much may and should be done to lead the people to their own profit, yet it must be done gently and gradually—always remembering that their contentment is no less important an object than is their material advantage. It must be remembered, moreover, that the object of excluding grazing from the preserves in question is the advantage of the neighbourhood; and that the realization of a larger income than grazing would yield, by preserving the produce, only to sell it to the highest bidder for consumption in large towns at a distance from the preserve, is not always in accordance with the policy which the Government of India have inculcated. Here again circumstances must decide. It may be that the local supply of fuel or fodder, independently of the reserved area, is sufficient in ordinary years for the needs of the neighbourhood. In such a case the produce may legitimately be disposed of in such years to the greatest advantage, reserving it for local consumption only when the external supply runs short. Finally, the remarks regarding agency in para 12, and the more general considerations that are discussed below in para 13 of this Resolution, apply in full force to areas thus reserved for the supply of fuel and fodder.

12. The fourth class of forests referred to are pastures and grazing grounds proper, which are usually forests only in name. It is often convenient, indeed, to declare them forests under the Act, in order to obtain a statutory settlement of the rights which the State on the one hand, and private individuals or communities on the other, possess over them. But it by no means follows as a matter of course that these lands should be subjected to any strict system of conservation, or that they should be placed under the management of the Forest Department. The question of agency is purely one of economy and expediency; and the Government of India believe that in some cases where these lands are managed by the Forest Department, the expenditure on establishment exceeds the revenue that is, or at any rate the revenue that ought to be, realized from them.

The following remarks apply, not only to forest lands under the Act, whether administered by the Forest Department or not, but also to all Crown waste, even though not declared to be forest. Here the interests of the local community reach their maximum, while those of the general public are of the slightest nature. It follows that the principles which have been already laid down for the management of minor forests apply, if possible, with even greater force to the management of grazing areas, pure and simple.

13. The difficulties which arise in connection with these areas are apt to present themselves in their most aggravated form where the tenure of land is ryotwari. In zamindari tracts the Crown lands generally assume the second of the two forms indicated in para 10 of this

Resolution. But where the settlement is ryotwari, every survey number or field that is unoccupied or unassigned is in the possession and at the disposal of Government, and trespass upon it is *prima facie* forbidden. In some cultivated tracts these unoccupied and waste lands are the only source available from which the grazing requirements of the resident population can be met. The Government of India are clearly of opinion that the inter-mixture of plots of Government land which are used for grazing only, but upon which trespass is forbidden, with the cultivation of occupancy or proprietary holders, is apt to lead to extreme abuses and especially so when these plots are under the management of the Forest Department. The inferior subordinates of the Forest Department are perhaps as reliable as can be expected on the pay which we can afford to give; but their morality is no higher than that of the uneducated classes from which they are drawn; while the enormous areas over which they are scattered and the small number of the controlling staff render effective supervision most difficult. It is not right, in order to protect the grass or the grazing dues on plots of waste scattered over the face of a cultivated district, to put it into the power of an underling to pound, or threaten to pound, cattle on the plea that they have over-stepped the boundary between their owner's field and the next. Still less right is it to permit the exercise of the power of compounding offences allowed by section 67 of the Forest Act to depend upon the mere report of a subordinate servant, or to expose him to the temptations which such a power holds out. Where the interests involved are sufficiently important, it may perhaps be necessary to accept the danger of extortion while minimizing as far as possible the opportunities for it. But in the case under consideration the interests involved are trifling, while the opportunities are unlimited.

14. It is to be distinctly understood that the Government of India do not desire that grazing should be looked upon primarily as a source of income. But it by no means follows that tall revenues from scattered Government lands should be relinquished. It is, indeed inadvisable that this should be done, as to do so would give the raiyats an interest in opposing allotment and making things unpleasant for new occupants. But the objections to direct management which have just been pointed out are reduced to a minimum or altogether avoided, when the management is placed in the hands of the resident cultivators or of representatives from among them. It will generally be possible to lease or otherwise manage the unoccupied lands of a village through the agency of the community not, indeed, at the highest price which they are ready to pay to escape such evils as have just been alluded to; but at a moderate estimate of their value to them fixed in view of the fact that herds and

flocks which cannot exist without grazing, are often a necessary condition of the successful conduct of that cultivation upon which the Government land-revenue is paid. In no case should fields that have been relinquished be let to outsiders at a reduced assessment for grazing purposes for then we might have speculators taking up such fields, mainly in order to make what they can out of trespassing cattle.

15. One more point of principle remains to be noctide. The procedure under Chapter IV of the Indian Forest Act, whereby forests are declared to be protected, has been in certain cases regarded by the Government of India as a provisional and intermediate procedure designed to afford time for consideration and decision with the object of ultimately constituting so much of the area as it is intended to retain, a reserved forest under Chapter II, and of relinquishing the remainder altogether. The act provides two distinct procedures. By the more strict one under Chapter II existing rights may be either settled, transferred, or communicated and this procedure will ordinarily be applied to forests of the first and second classes indicated in para 3 of this Resolution. By the second procedure under Chapter IV rights are recorded and regulated and this procedure will often be properly followed where the rights to which the area is subject are extensive and the forest is to be managed mainly in the interests of the local community. It will ordinarily be applied to forests of the third and fourth classes. This second procedure may indeed be provisional, and introductory to reservation under Chapter II, but there is in the Forest Act nothing repugnant to giving it a larger and even a permanent operation. As regards Government the chief difference between the two procedures is that new rights may spring up in a protected but not in a reserved forest, and that the recorded-of-rights framed under Chapter II is conclusive while that framed under Chapter IV only carries a presumption of truth. It is believed that this presumption offers ample security where the object of regulating the rights is to provide for their more beneficial exercise rather than to override them in the public interest. As regards the people the chief difference is that, speaking broadly, in a reserved forest everything is an offence that is not permitted, while in a protected forest nothing is an offence that is not prohibited. In theory it is possible so to frame the permission and the prohibition as to make the results identical in the two cases, but in practice it is almost impossible to do so. If it were not so, the distinction drawn by the Legislature would be unnecessary and meaningless. It is only where the public interests involved are of sufficient importance to justify the stricter procedure and the more comprehensive definition of forest offences that the latter should be adopted.

16. The Governor General in Council desires, therefore, that with regard both to fuel and fodder preserves and to grazing areas pure and simple, and specially to such of them as lie in the midst of cultivated tracts, it may be considered in each case whether it is necessary to class them, or, if already so classed, to retain them as forest area; and if this question is decided in the affirmative, whether it would not be better to constitute them protected rather than reserved forests.

17. Such are the general principles which the Government of India desires should be observed in the administration of all State forests in British India. They are fully aware that the detailed application of these principles must depend upon an infinite variety of circumstances which will have to be duly weighed in each case by the local authorities, to whose discretion the decision must be left. One of the dangers which it is most difficult to guard against is the fraudulent abuse of concessions for commercial purposes, and only local considerations can indicate how this can best convert. The Government of India recognize the fact that the easier treatment in the matter of forest produce which His Excellency in Council desires should be extended to the agricultural classes may, especially in the case of true forest areas, necessitate more careful supervision in order that the concession may be confined within its legitimate limits. But, on the other hand, they think that in some Provinces it will render possible a considerable reduction of existing establishment and they desire that this matter may be carefully considered with reference to what has been said above in paragraph 12. They know also in some Provinces forest policy is already framed on the lines which they wish to see followed, in all. But the Governor-General in Council believes that Local Governments and Administrations will be glad to receive the assurance now given them that the Supreme Government will cordially support them in recognizing and providing for local requirements to the utmost point that is consistent with Imperial interests. Where working-plans or plans of operation are framed for forests the provisions necessary for this purpose should be embodied in them. The exercise of the rights that have been recorded at settlement will necessarily be provided for in these plans. Where further concessions are made by the way of privilege and grace, it will be well to grant them for some such limited period as ten years, so that they may, if necessary, be revised from time to time as the circumstances on which they were moulded change.

## APPENDIX II

(*Vide* para 1.17 of the Report)

## MINISTRY OF FOOD AND AGRICULTURE

### RESOLUTION

**Agriculture**

*New Delhi, the 12th May,* 1952

### NATIONAL FOREST POLICY

**Introduction**

**No. 13-1/52-F.**—In their Resolution No. 22-F., dated the 19th October, 1894, the Government of India in the late Department of Revenue and Agriculture enunciated in broad outlines the general policy to be followed in the management of State forests in the country. During the interval that has since elapsed, developments of far-reaching importance have taken place in the economic and political fields. The part played by forests in maintaining the physical conditions in the country has come to be better understood. The country has passed through two world wars which disclosed unsuspected dependence of defence on forests. The reconstruction schemes, such as river-valley projects, development of industries and communications lean heavily on the produce of forests.

2. While the fundamental concepts underlying the existing forest policy still hold good, the Government of India consider that the need has now arisen for a re-orientation of the forest policy in the light of the changes which have taken place since it was enunciated.

3. **Vital national needs.**—The National Forest Policy of India is formulated on the basis of six paramount needs of the country, namely:—

(1) the need for evolving a system of balanced and complementary land-use, under which each type of land is allotted to that form of use under which it would produce most and deteriorate least;

(2) the need for checking;

(a) denudation in mountainous regions, on which depends the perennial water supply of the river system whose basins constitute the fertile core of the country;

(b) the erosion progressing apace along the treeless banks of the great rivers leading to ravine formation, and on vast stretches of undulating wastelands depriving the adjoining fields of their fertility;

(c) the invasion of sea-sands on coastal tracts, and the shifting of sand dunes, more particularly in the Rajputana desert;

(3) the need for establishing treelands, wherever possible, for the amelioration of physical and climatic conditions promoting the general well being of the people;

(4) the need for ensuring progressively increasing supplies of grazing, small wood for agricultural implements, and in particular of firewood to release the cattledung for manure to step up food production;

(5) the need for sustained supply of timber and other forest produce required for defence, communications and industry;

(6) the need for the realisation of the maximum annual revenue in perpetuity consistent with the fulfilment of the needs enumerated above.

These vital needs indicate the functions forests are to fulfil, and provide the fundamental basis of the policy governing their future.

4. **Functional classification of forests.**—Having regard to the functions aforestated, the forests of India, whether State or privately owned, may be conveniently classified as follows:—

(*A*) *Protection forests, i.e.,* those forests which must be preserved or created for physical and climatic considerations;

(*B*) *National forests, i.e.,* those which have to be maintained and managed to meet the needs of defence, communications industry and other general purposes of public importance;

(*C*) *Village forests, i.e.,* those which have to be maintained to provide firewood to release cowdung for manure, and to yield small timber for agricultural implements and other forest produce for local requirements, and to provide grazing for cattle;

(*D*) *Tree-lands, i.e.,* those areas which though outside the scope of the ordinary forest management are essential for the amelioration of the physical conditions of the country.

This classification is merely illustrative and is by no means mutually exclusive. In fact every forest performs more than one function, and has, therefore, to be so managed as to achieve the highest efficiency in respect of the chief functions assigned to it. This functional classification has also no bearing on the classification of forests distinguished in the Indian Forest Act XVI of 1927, which is based on the degree of control exercisable in them.

5. **Necessity of classification.**—This broad functional classification of forests is necessary to focus attention on the kind and object of management necessary in each case. Every sizeable forest, whatever its composition, location, or category, serves both a protective and a productive purpose, and in its utility may be of local, regional, or national significance. The fact, however, must be realised that the country as a whole has a vast stake in the conservation of all forests, irrespective of their functions and ownership, and, therefore, all of them should be administered from the point of view of national well-being.

6. **Two possible considerations.**—Two considerations, plausible, no doubt, at first sight, but, if given undue weight to, destructive of national well-being in the long run, should be combated. They are:—

(1) Neighbouring areas are entitled to a prior claim over a forest and its produce.

(2) Agricultural requirement has a preferential claim over forest lands.

7. **Claims of neighbouring Communities.**—Village communities in the neighbourhood of a forest will naturally make greater use of its products for the satisfaction of their domestic and agricultural needs. Such use, however, should in no event be permitted at the cost of national interests. The accident of a village being situated close to a forest does not prejudice the right of the country as a whole to receive the benefits of a national asset. The scientific conservation of a forest inevitably involves the regulation of rights and the restriction of the privileges of user, depending upon the value and importance of the forest, however irksome such restraint may be to the neighbouring areas. The Himalayan forests, for instance, are the greatest of national assets; to them we owe the richness of the country. The denudation and under-development of the Himalayan slopes leads to greater intensity and frequency of floods, recurrent erosion, and to coarse detritus being deposited on the fertile sub-

montane tracts. This process inflicts immeasurable loss and misery on the unsuspecting millions in the Indo-Gangetic Plain, and brings about a progressive and permanent impairment of soil fertility, and a cumulative reduction in the agricultural potential of the whole land. While, therefore, the needs of the local population must be met to a reasonable extent, national interests should not be sacrificed because they are not directly discernible, nor should the rights and interests of future generations be subordinated to the improvidence of the present generation.

**8. Relinquishment of forest land for agricultural purposes.**—The indiscriminate extension of agriculture and consequent destruction of forests have not only deprived the local population of fuel and timber, but have also stripped the land of its natural defences against dust-storms, hot desiccating winds, and erosion. The old policy, which envisaged the relinquishment subject to certain safeguards honoured only in their breach, of even valuable forest land for permanent cultivation, has resulted in general deterioration of physical conditions to the detriment of national interests, and must, therefore, be given up. In the abstract, the claims of agriculture undoubtedly appear stronger than those of forestry. The notion widely entertained that forestry, as such, has no intrinsic right to land but may be permitted on sufferance on residual land not required for any other purpose, has to be combated. The role of forests in the national economy, both protective and productive, entitles forests to lay claim to an adequate share of land. The importance of tree lands in the rural economy of this region where agriculture constitutes the main-stay of the vast bulk of population can scarcely be over-emphasized.

**9. Land use.**—The correct solution of the land problem is to evolve a system of balanced and complementary landuse, under which each type of land is allotted to that form of use under which it would produce most and detriorate least. A detailed survey of lands with a view to their proper utilization is, therefore, highly desirable.

**10. Protection forests.**—'Protection forests' denote forests found, or required, on hill slopes, river banks, sea-shores, or other erodable localities. In such sites, the need for forest cover is dictated by purely protective physical considerations, such as prevention of erosion, conservation of moisture, and control of rushing torrents and floods. The role of such forests in saving the soil from being washed away, and when maintained in catchment areas, in the prevention of floods and maintenance of stream-flow, cannot be over-emphasized. On flat country with loose scandy soil, especially under dry conditions, forests, whether natural or artificial, perform an essential function in minimising wind erosion, fixing the soil and preventing the formation of sand dunes, and mitigating the desiccation of agricultural crops leeward of the tree cover.

The National Forest Policy requires, therefore, an immediate and speedy programme for the reconditioning of the mountainous regions, river valleys, and coastal lands by establishing protective forests over larger areas, and preserving the existing ones. The primary object of management of such forests should be to utilise in full their protective influence on the soil, the water regime, and the physical and climatic factors of the locality; and the interests to be thus protected should far outweigh those which it may be necessary to restrict. The scientific management of such 'protection forests', wherever possible, should include the production and exploitation of timber within the limits of safety.

**11. Reconditioning of hills and dales.**—The progressive denudation of hillsides with serious repercussions on the fertility of the land, and the growing erosion along the banks of rivers, of which the Yamuna, the Chambal, the Mahi, the Narmada, the Kosi, and the Damodar are notorious examples, constitute the major considerations demanding immediate attention.

**12. The immobilization of the desert of Rajputana.**—Attention also needs to be drawn here to the Rajputana desert, more particularly to the fixation of the shiftings and dunes. Strong winds that develop in this region during the summer, transport vast quantities of sand and salt from the sea and Runn of Cutch, whipping the desert into terriffic dust storms, the fury of which is felt throughout the north-western India. The desert has spread through the ages causing the 'westering' of the Indus and the 'northering' of the Sutlej, meeting an obstruction of sorts only along its eastern confines in the Aravallis. The immobilization of the desert and protection of the remaining fertile belts inside it constitutes one of the planks of the National Forest Policy.

**13. National forests.**—'National forests' constitute the basis of India's strength and wealth; for they comprise valuable timber bearing regions the produce of which is indispensable for defence, communications and vital industries. They have to be managed chiefly in the interest of the nation as a whole, and their organization and development is one of the most important functions of the States. Their management on scientific and business lines is essential for maintaining a sustained supply of wood for industry and of large timbers for defence, communications and other national purposes. The basic policy, so far as such forests are concerned, must be to attain national self-sufficiency in these vital supplies. Future development should, therefore, be directed to that end. Cultivation should not be permitted to encroach upon these valuable timber bearing tracts. The solution of the food problem of

an ever-increasing population must be sought primarily in intensive cultivation and not in weakening the very basis of national existence by encroaching upon such forests.

**14. Village forests.**—'Village forests' popularly termed fuel forests, are intended, in the main, to serve the needs of the surrounding villages in respect of small timber for housing and agricultural implements, firewood, leaves for manure and fodder, fencing thorns, grazing and edible forest products. The supply for such requirements should be made available at non-competitive rates, provided they are utilised by the villagers themselves and not traded in. The management of such village forests should aim at meeting the present as well as the future needs of the local population. Removal of the produce in excess of its annual growth should not, therefore, be permitted. Restrictions should be imposed in the interests not only of the existing generation but also of posterity. These considerations render the entrusting of the management of village forests to *panchayats,* without appropriate safeguards, a hazardous undertaking as has been domonstrated in some of the States. The cooperation of *panchayats* should be enlisted in the protection and creation of village forests, and in the distribution of forest produce assigned to meet the needs of the local population, but not at the cost of economy and efficiency. While the profit motive in the management of these forests should be relegated to the background, there is no justification for allowing them to become a burden on the general tax-payer: the expenses for development and maintenance of such forests must come from their own income.

**15. Treelands.**—Although 'treelands' are not part of regular forests, in a country like India where their increase, management and development are vital to the needs of the people, they cannot well be left out of any well-considered policy. The Land Transformation Programme of the Government of India envisages the planting of 30 crores of trees in ten years; but this number is very far from about 2,000 crores of trees, which would be necessary to restore the hydrological nutritional balance of the country. The creation of forests by State Forest Departments on such an elaborate scale is ruled out at present by lack of funds and trained personnel. The only way in which some progress can be achieved is by making the whole nation 'tree conscious'. Such consciousness will stimulate private efforts at tree planting as has been demonstrated by the success of the *National Vana Mahotsava* movement. It will also arrest the vandalism which feels no scruples in cutting down valuable trees, and create among the populace an urge to secure the protection of trees—a virtue as much to be desired as it is rare.

16. **Scope for increasing treelands.**—State Governments have a vast scope for an all-round increase in the area under treelands, Defence, Railways, Public Works Departments, Universities and Colleges, District Boards, Municipalities and other local authorities, associations and institutions can lend a helping hand by converting the lands at their disposal into treelands. The new Forests Policy, therefore, envisages a concerted and supreme effort on the part of various Governments and other agencies towards planned afforestation with a view to the enlargement of treelands. The exploration of the possibilities of such a development by the Central State is clearly indicated. A systematic programme of extending existing treelands and establishing new ones should be framed by the Governments concerned. Under the new Policy, it should be the duty of the Forest Departments concerned:

(a) to awaken the interest of the authorities within their region in the development, extension, and establishment of treelands;

(b) to draw up plans for such purposes bearing in mind the need for species of commercial importance;

(c) to establish nurseries and seed stores in each area for the supply of saplings, plants, and seeds;

(d) to supervise the planting of trees, and render such technical assistance as may be necessary for the development of treelands; and

(e) to arouse tree consciousness among the people by publicity, by celebrating the Vana Mahotsava, and by encouraging the Vana Premi Sangh.

17. **Treelands in agricultural areas.**—The importance of treelands in the rural economy of the regions where agriculture constitutes the mainstay of the vast bulk of the population cannot be over-emphasized. Experience gained during the first two Vana Mahotsavas indicated a very considerable response in the countryside, where Government officers had prepared the ground and created the necessary enthusiasm among the people. A campaign inducing villagers to plant trees in village commons and along roadsides, on the condition that they would enjoy the benefit of the fruits, timber, and other produce of trees planted by them has yielded excellent results and is well worth an extended trial. The essence of success in such ventures lies in invoking the willing co-operation of the local villagers, the necessary technical guidance and help being furnished by the Forest and other Departments. In most localities, a cultivator has no land to utilize for raising trees; there is, however,

nothing to prevent him from growing at least a few trees per acre on his own field. Much useful work in this direction has been done in the western district of Uttar Pradesh where cultivators have raised a fair amount of *babul* (Acacia arabica) in their fields. Other species may prove to be of equal utility in other regions.

**18. Control of private forests.**—The ownership of private forests in States where they still exist vests in individuals. Such ownership must, however, be regulated in the national interests so that the indiscriminate exercise of individual rights may not prejudice, or endanger, general welfare, Regulation and control of private forests by the State on physical, climatic, and economic grounds is, therefore, imperative. Recent legislation in various States has assumed the following pattern:—

(1) Owners of private forests should, in the first instance, be given an opportunity to manage their forests in accordance with an approved working plan.

(2) In the case only of recalcitrant owners, who are tempted to sacrifice their capital for immediate gain, should the management of their forests be made to vest in Government by due process of law.

(3) The ownership of such 'vested forests' should remain, however, unaffected; and the transfer should relate only to management, the net profits arising therefrom, if any, accruing to the owner.

The object of the legislative measures oultined above stand in grave risk of being defeated by the tendency discernible among owners of private forest to cash in their assets by excessive exploitation of forests or personal ends. In order to arrest such destruction of forests, the national forest policy requires that their control and management should be strictly regulated, and where that cannot be done, they should be taken over by the State Governments by effective legislation.

**19. Proportion of forest areas.**—The proportion of land to be kept permanently under forests would naturally vary in different regions. Practical consideration suggests, however, that India, as a whole, should aim at maintaining one-third of its total land area under forests. As an insurance against denudation a much larger percentage of the land, about 60 per cent should be kept under forests for their protective functions in the Himalayas, the Deccan, and other mountainous tracts liable to erosion. In the plains, where the ground is flat and erosion is normally not a serious-factor, the proportion to be attained should be placed at 20 per cent; and in view of the pressure of agriculture, effort

at the extension of treelands should be concentrated on river banks and other convenient places not suitable for agriculture. At the same time it must be realised that even distribution of forests in all physical regions is as important as its over-all proportion. In certain localities deficient in forests, therefore, afforestation of marginal lands, and eroded river and village waste-lands, should be undertaken. Forest area in excess of the indicated proportion, if any, should, however, not be sacrificed. To maintain an over-all average, it is essential that States better suited for the growth of trees should help to make good the deficiency in those parts where climatic and edaphic factors militate against tree-growth.

20. **Wild Life.**—The National Forest Policy emphasizes the need for affording protection to the animal kingdom and particularly to rare species such as the lion and the great one-horned rhionceros, which are fast disappearing. While the damage caused by such predators as wild pigs, game and porcupine cannot be denied, the elimination of their natural enemies tends to multiply them. It is necessary, therefore, that bird and animal life should be controlled by special laws and rare fauna preserved by setting up sanctuaries and large-scale national parks. For this purpose, a Central Board for Wild Life has been constituted by the Government of India in the Ministry of Food and Agriculture Resolution No. 7-110|51-F., dated 4th April, 1952.

21. **Grazing.**—The controversial question of grazing in State forests calls for a clear definition of policy. Speaking generally, all grazing in forests, particularly unlimited or uncontrolled grazing, is incompatible with scientific forestry. At the same time, grazing does take place in forests and must be accepted as a hard fact. There are indeed circumstances in many regions where a moderate amount of grazing does little direct harm, and may even do a great deal of indirect good in reducing the risk of fire and in suspending regression at a desirable stage. But efficient forest management requires that grazing should be regulated as regards the time and place, as also the number of cattle admitted. The formulation of the grazing policy should be based on the following cardinal principles:—

(a) Continuous grazing on the same areas by large herds is destructive of the better strains of grasses and leads to a deterioration of the gass complex. Wherever it is permitted and is in great demand, efforts should be made to introduce rotational grazing, the benefits of which should be explained and demonstrated to the villagers.

(b) Cheap forest grazing has a demoralising effect and leads to the vicious spiral of reckless increase in the number of cattle,

in adequate forest grazing, reduced quality of the herds and further increase in the numbers to offset the fall in quality. Free and indiscriminate forest grazing is, therefore, a serious disservice to cattle breeding. The notion that a farmers's wealth must be reckoned in terms of the number of cattle he owns, regardless of quality, is one of the causes of India's uneconomic cattle wealth and must be combated.

(c) Grazing should not be looked upon primarily as a source of revenue. But the simple and obvious way of regulating and controlling grazing as also improving the quality both of grazing and cattle themselves, is to institute a reasonable fee for the privilege grazing.

(d) Grazing must not be allowed in regeneration areas and young plantations during such periods as the seedlings require for establishment; otherwise they stand in danger of being browsed or trampled upon.

(e) Grazing incidence should be kept at a minimum in 'Protection Forests'.

22. **Sheep and goats.**—Experience gained in India and elsewhere points to the imposition of restrictions on sheep grazing in forests, and the total exclusion of goats therefrom. The damage to young plants caused by the browsing of these animals is often irreparable, and their admission into the forest is incompatible with the aims and objects of forest management. The creation of special fodder reserves under strict rotational control is indicated for the purpose.

23. **Shifting cultivation.**—The damage caused to forests by shifting cultivation in certain areas must be guarded against. To ween the aborigines, who eke out a precarious living from axe-cultivation moving from area to area, away from their age-old and wasteful practices, requires persuasion, not coercion; a missionary, not an authoritarian, approach. Possibilities of regulating shifting cultivation by combining it with forest regeneration (*Taungya*) to the benefit of both shuold be fully explored. Success in this direction largely depends on enlisting the co-operation of the cultivators and gaining their confidence and in showing consideration to their needs and wishes.

24. **Sustained yields.**—With a view to conserving forest resources in perpetuity, the new Forest policy requires scrupulous regard for sustained yield in the management of all classes of forests. The fluctuations in the annual outturn of forests upset State budgets, industries, and other national enterprises, all working plans, therefore, should aim at confin-

ing them within the narrowest limits. This aspect assumes even greater significance in case where private owners manage their own forests. The compilation of all sound working plans, therefore, requires:—

(a) the calculation of increment so that what is annually put on is annually cut, leaving the original assets intact or improved;

(b) the preparation of maps, and investigations on the propagation and tending of various species, their increment, the optimum conditions of their growth and the regulation of yield;

(c) carefully planned afforestation schemes to replace inferior tree growth by valuable species of commercial importance.

Each State, therefore should set up a permanent organization to deal with working plans—their compilation, and revision and deviations from them, research and statistics, as well as to conduct detailed surveys of available forest resources which are a *sine qua non* for a sound forest management.

25. **Forest administration.**—The efficiency of forest administration depends directly on the adequacy of the forest laws, the training and calibre of the professional forest services, and the progress of research on both the biological and the utilisation aspects of forestry.

26. **Forest legislation.**—So far as forests under the control of the Central Government and of Part A States are concerned, adequate forest legislation exists in the Indian Forest Act and the Madras Forest Act. In some of the Part B States, there are forest regulations having the force of law. But there are some Part C States where forest laws do not exist. It is necessary, therefore, that States without a proper Forest Act should enact legislation at an early date on the lines of the Indian Forest Act, or validate that Act for their territory. Several States have already enacted legislation for the control of private forests; it is desirable that States which have no such laws should enact them early. While framing legislation for private forests, States should not overlook the need for providing adequate staff for enforcing its provisions.

27. **Forest education.**—Forestry courses are at present conducted for Forest Rangers and Superior Forest Officers at the Forest Research Institute and the Colleges. The States would be well-advised to continue taking advantage of the facilities provided by the Central Government at Dehra Dun, associated with the well-equipped Forest Research Institute, which enjoys a world-wide reputation. A common forest educa-

tion is a very effective means of inculcating an *espirit de corps* among forest officers of developing a common outlook in forestry matters; and of ensuring concerted and integrated policies throughout the country. Openings in the profession of forestry being limited, the decentralization of forest education will militate against economy and efficiency, encourage fissiparous tendencies, create unemployment, and render planned development of forest resources difficult.

28. **Training of field staff.**—Attention has also to be directed to the proper training of lower executive staff on whose technical skill ultimately depends the proper execution of forest schemes and their extension. The tendency to start schools which are not properly equipped should be discouraged. It is necessary that contiguous States should combine and co-operate in establishing well-equipped and up-to-date training schools for the purpose of meeting their needs in the most economical manner.

29. **Services.**—The idea held in some quarters that since forest grow by themselves, they need no technical management is based on ignorance. Inadequacy of technical personnel, and weakening of the professional standards of the men called upon to manage forests, would be followed not only by a loss of revenue but also by a general degradation of the forests, resulting in reduced output of forest produce and in deterioration of physical conditions.

30. **Forest Research.**—Investigations in the biological aspects of forestry, among others Silviculture, Botany, and Entomology, have naturally leaned heavily upon the co-operation of Forest Departments of the various States, most of which have an organization of their own for the purpose. The maintenance of a research organization in each State commensurate with its resources and requirements is in the interests of efficient forest management of the country as a whole. Research in the utilization of forest products has, on the other hand, always been initiated and conducted at the Forest Research Institute where special equipment for the purpose exists. This balanced arrangement ensures both efficiency and economy. The Institute also is naturally the centre for specialized education in forest industries; and special technical courses in paper and plywood technology, wood preservation, timber seasoning and other cognate subjects have been organised to meet the demands of industry for technicians.

31. **Liaison with industry.**—There is also considerable scope for improvement in securing the utilization of the results of research on forest products by commercial and industrial interests. For ensuring closer contact between the Forest Research Institute and the interests utilizing

timber and forest products, liaison and publicity arrangements at the Institute need to be strengthened.

32. **Popular goodwill, co-operatives and forest workers.**—While forest legislation, forest education, and forest research constitute the basis for sound forest management, the welfare and goodwill of the people in the neighbourhood of forests provide the firm ground on which it stands. No forest policy, however well intentioned and meticulously drawn up, has the slightest chance of success without the willing support and co-operation of the people. The recognition of their rights to forest produce at concession rates, or, free of royalty, is not by itself enough. What is necessary is to instil in the people a direct interest in the utilization of forests. Intermediaries who exploit both the forests and local labour for their own benefit may with advantage be supplanted gradually by forest labour co-operative societies which may be formed to suit local conditions. Once the local population learns to look upon the forest as a means of its livelihood, a great steps forward will have been taken.

33. **Forest budgets.**—Forestry is a long range enterprise and it becomes incumbent upon State Governments to secure for it freedom from the vagaries of the annual budget. A steady flow of funds is indispensable for sustained forest operations such as, replacement of what is removed annually, improvement of remaining crops, development of communications for opening up remote areas, and protective measures; they have to be based on phased schemes which should not be set aside lightly. Budget cuts made from year to year to meet the exigencies of State finances can only be made at the expense of continuity in forest management—apart from other benefits—and at the sacrifice of forest revenue and other benefits in the coming year. The creation of a sinking fund, therefore, by investing a portion of the revenue in Governmnt securities, more particularly during boom years, would not only ensure availability of funds for replacement and development costs, but may also be made to act as an equalizing fund to be drawn upon in lean years to prevent a fall in revenue. The immediate profit motive should be rigidly ruled out; for, this urge may endanger the supply of large and special timber for defence and industry and lead to a disturbance of climatic conditions seriously affecting agriculture. The adoption of rotations to produce large-sized timber is often of greater importance to the general economy of the country than that of rotations which yield the maximum rate of interest in forest investments.

34. **Policy—an enunciation of general principles.**—While the discretion of State Governments to regulate the details of forest administra-

tion in their respective territories is left unfettered, the general principles of the above forest policy should, in paramount national interests, be observed by them in framing their policies and legislation for the conservation of their forest resources. The forest policy of every State should be so framed as not to impinge adversely upon the general economy and physical balance of an adjoining State. It should be in consonance with the general principles underlying the Forest Policy laid down by the Centre for the preservation and development of the nation's forest resources which are so vital to its general well-being.

VISHNU SAHAY, Secy.

## APPENDIX III

(*Vide* para 2.6 of the Report)

ORGANISATIONAL SET-UP OF THE DEPARTMENT OF AGRICULTURE (FORESTRY)

MINISTER OF FOOD, AGRICULTURE, C.D. & COOPERATION

MINISTER OF STATE (AGRICULTURE)

DEPUTY MINISTER (AGRICULTURE)

SECRETARY (AGRICULTURE)

INSPECTOR GENERAL OF FORESTS AND *EX-OFFICIO* JOINT SECRETARY TO THE GOVERNMENT OF INDIA

*Assisted in technical matters by* :

Deputy I. G. Forests,
Secretary, Central Forestry Commission
Asstt. I.G.F. (General)
Asstt. I.G.F. (Wild Life)
Asstt. I.G.F. (Forest Industries)
Assistant Director (Statistics)

*Assisted in Administrative matters by*
Under Secretary (Forest)

- Forest Instt. (I) Section
- Forest Instt. (II) Section
- Forest Dev. Sec.
- Forestry Statistical Cell
- F.R.I.&C. Dehra Dun
  - F.R.L. Bangalore
  - Biological Res., S.F. RC. & Research Centre
- Delhi Zoological Park
- UND/FAO/G.O.I. Projects
  - Preinvestment Survey of Forest Resources
  - Logging Training Centres

## APPENDIX IV

(*Vide* para 3.50 of the Report)

No. F. 6-1|66 SAP

GOVERNMENT OF INDIA

MINISTRY OF FOOD, AGRICULTURE, C. D. & COOPERATION
DEPARTMENT OF AGRICULTURE

*New Delhi*—1, *the* 18*th June,* 1966.

28*th Jyaistha,* 1888 (*Saka*).

RESOLUTION

The question of rapid development of the desert areas of the country has been under the consideration of the Government of India for some time. These areas have not received adequate attention in the past partly because of the large financial outlays required for their development and partly because the results from these investments are not expected to be either quick or spectacular. The Government of India have, therefore, decided to set up a Central Desert Development Board to ensure a more rapid development of the areas. The Board will consist of the following:—

1. Secretary/Spl. Secretary to Government of India, Department of Agriculture . . . Chairman
2. One representative of the State Government of Rajasthan . . . . . Member
3. One representative of the State Government of Haryana . . . . . Member
4. One representative of the State Government of Gujrat . . . . . Member
5. One representative of the Ministry of Health & Family Pl., Govt. of India . . . . Member
6. One representative of the Ministry of Education Govt. of India . . . . . Member
7. One representative of the Ministry of Irrigation & Power, Govt. of India . . . . Member
8. One representative of the Ministry of Finance (Expenditure) Govt. of India . . . Member



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9. One representative of the Deptt. of Communications, Govt. of India . . . . . Member

10. One representative of Deptt. of Social Welfare, Govt. of India . . . . . Member

Enclosure to Point No. 14 (Annexure II) page 2.

11. One representative of the Planning Commission Member

12. Shri V.C.J. Patel, Patel Farm, Akol Chhoti, P.O. Deesa, Dist. Banaskantha, Gujarat . . Non official rep.

13. Shri Poonam Chand Bishnoi, Village Bacharana, P.O. Dhundara, P.S. Luni, Dist. Jodhpur (Raj.) Do.

14. Col. Wattan Singh, Vill. & P.O. Gochhi, Teh. Jhajjar, Dist. Rohtak, Haryana . . . Do.

15. Shri Y. R. Ghorpade, Raja of Sandur, Sandur Palace, Mysore, South India . . . Do.

16. The Director, Desert Development Board . Member-Secy.

17. The Director, Central Arid Zone Research Institute, Jodhpur . . . . . Member

The function of the Board will be:—

(i) To keep under constant review the preparation of schemes for the development of the desert areas;

(ii) To arrange for the execution of these schemes through the agencies of the State Governments;

(iii) To remove administrative bottlenecks hindering the progress of the schemes;

(iv) to arrange for training of personnel required for these schemes and in general;

(v) To ensure that the desert areas of the country receive the attention they deserve.

3. The Board will meet at least once in six months, and may meet as often as may be decided by the Chairman.

4. The Chairman of the Board may invite to its meeting any technical or other officers from the various Ministries of the Government of India or from the State Governments.

Sd. B. SIVARAMAN,

*Secretary to the Govt. of India.*

## APPENDIX V

*Revised constitution of the Indian Board for Wild Life.*

Constitution of the Indian Board for Wild Life as contained in Government of India, Ministry of Food and Agriculture (Department of Agriculture) Resolution No. 10–39|61-FII dated 15th October, 1962 as amended by Notification No. 9-58|62-FII dated 20th November, 1963: and No. 9–5|64-FII dated 20-7-1964.

(1) Chairman–A person to be nominated by the Government of India.

(2) Pro-Chairman–Deputy Minister of Agriculture.

(3) Vice-Chairman (i) Secretary, Ministry of Food and Agriculture (Department of Agriculture).

(ii) A member of Indian Board for Wild Life to be nominated by the Government of India.

*Members*

| | |
|---|---|
| (4) | Inspector General of Forests. |
| (5—7) | Three members representing the Parliament of India, two from Lok Sabha and one from Rajya Sabha. |
| (8—11) | Four Honorary Regional Secretaries to be nominated by the Government of India, to represent each of the four regions mentioned in Clause 3 of the Constitutions. |
| (12—36) | One representative each of:<br>The Ministry of Commerce & Industry, New Delhi.<br>The Zoological Survey of India.<br>The Botanical Survey of India.<br>Forest Departments of the States and Union Territories. |
| (37—40) | One representative each of:<br>The Bombay Natural History Society.<br>The National Institute of Sciences of India.<br>The Zoological Society of India; and<br>The Inter University Board. |
| (41—42) | The Director General of Tourism, Ministry of Transport and Communications.<br>The Fisheries Development Adviser to the Government of India. |

(43—46) . . Four persons to represent the zoos and zoological gardens, to be nominated by the Government of India.

(47 to . . Such other members nominated by the Government of India to represent Wild Life Clubs, Wild Life Preservation Societies, eminent naturalists, well-known sportsmen, renowned taxidermists etc.

The Secretary to the Board shall be a person appointed by the Government of India.

2. The functions of the Board shall be:

(i) to advise the Central and State Governments on the ways and means of conservation and control of wild life through co-ordinated legislative and practical measures with particular reference to seasonal and regional closure, and the declaration of certain spacies of animals as protected animals and the prevention of indiscriminate killing;

(ii) to sponsor the setting up of national parks, sanctuaries and zoological gardens;

(iii) to promote public interest in wild life and the need for its preservation in harmony with natural and human environment;

(iv) to advise the Government on the policy regarding export of living animals, trophies, skins, furs, feathers and other products of wild life;

(v) to assist and encourage the formation of wild life societies and to act as a Central Co-ordinating agency for all such bodies;

(vi) to review from time to time the progress in the field of wild life conservation in the country and suggestion such measures for improvement as are considered necessary;

(vii) to perform such other functions as are germane to the purposes for which the Board is constituted;

(viii) to advise the Central and State Governments concerned on any point referred to it by them providing the subject matter of the reference falls within the prescribed functions of the Board.

(ix) to carry on propaganda for the promotion of the objectives herein before mentioned.

(x) to collect statistics in respect of the wild life population of the country and other matters referred to above;

(xi) to establish and maintain research and reference libraries and reading rooms;

(xii) to do all such other things either alone or in conjunction with others or on the direction of the Government of India, which the Board may consider necessary, advisable or conducive to the preservation and conservation of wild life or for the other similar purposes for which it is constituted including those mentioned herein.

3. *Regions of the Board.*

For purposes of co-ordination the country will be devided into four regions as under:—

(1) *Eastern Region.*—Comprising the States of Assam, Bihar, Orissa, Manipur, Tripura, Nagaland, NEFA, and West Bengal.

(2) *Southern Region.*—Comprising the States of Andhra Pradesh, Kerala, Madras, Mysore, Andaman & Nicobar Islands, and Pondichery.

(3) *Western Region.*—Comprising the States of Maharashtra, Rajasthan, Madhya Pradesh and Gujarat.

(4) *Northern Region.*—Comprising the State of Punjab, Jammu & Kashmir, Uttar Pradesh, Himachal Pradesh and Delhi.

4. *Duration of Membership.*

(i) Members other than those who are members by virtue of the *office or appointment* held by them, shall hold office for a period of 4 years.

(ii) A member of Parliament who is a member of the Board shall cease to be such on the dissolution of the Parliament or on his ceasing to be a member;

(iii) A member shall cease to hold office on the happening of any of the following events: if he shall dies, resign, become of unsound mind, become insolvent or be convicted by a court of law of a criminal offence involving normal turpitude.

(iv) Any vacancy in the membership cause by any of the reasons mentioned above shall be filled by the appointment or nomi-

nation by the authority entitled to make such appointment or nomination. All such vacancies, shall be filled for the remaining period out of the tenure period for 4 years.

5. *Meetings of the Board.*

The Board shall ordinarily meet once in two years.

6. The Board shall be competent to appoint committees including an executive committee to perform specific activities and|or to advise thereon.

7. Government of India, Ministry of Food and Agriculture Resolution No. 7-110|51-R dated the 4th April, 1952 as amended by Resolution No. 23-2 (18)|53-F, dated the 10th March 1953, No. F.5-25|55-F dated the 26th April, 1955 and No. F.1-132|55-F dated the 1st November, 1955, constituting the Indian Board for Wild Life is hereby repealed.

## APPENDIX VI

(*Vide* para 7-11 of the Report)

*List of the Chairman and members of the Indian Board for Wild Life*

| | |
|---|---|
| ***Chairman*** | |
| 1. Major General H.H. the Maharaja Sri Jaya Chamaraja Wadiyar Bahadur, G.C.B. G.C.S.I., The Palace, *Mysore.* | |
| ***Pro-Chairman*** | |
| 2. Shri Annasaheb P. Shinde, Minister(s), Ministry of Food, Agri., C.D. & Coop. *New Delhi.* | |
| ***Vice-Chairman*** | |
| 3. Shri B. Sivaraman, Secretary to the Govt. of India, Ministry of Food, Agri., C.D. & Coop. (Deptt. of Agri.) *New Delhi.* | |
| 4. Shri K. S. Dharmakumarsinjhi, Dil Bahar, *Bhavnagar.* | Non-official. |
| ***Secretary*** | |
| 5. Shri S. N. Tulsiani, Under Secretary to the Govt. of India, Ministry of Food, Agri., C.D. & C. (Deptt. of Agri.) *New Delhi.* | |
| 6. H.H. Maharaja P. K. Deo, M.P. 29, Ferozeshah Road, *New Delhi.* | Non-official. |
| 7. Shri V. C. Shukla, Minister (s), Ministry of Home Affairs, 4-Sunheri Bagh Road, *New Delhi.* | |
| 8. Shri Dalpat Singh, M.P., 168-South Avenue, *New Delhi.* | Non-official. |
| 9. Shri Hari Singh, Inspector General of Forests, Ministry of Food, Agri., C.D. & C., (Deptt. of Agri.) *New Delhi.* | |
| 10. H.H. Maharaja Pratap Singh of Nabha, 23-Golf Links, *New Delhi.* | Non-official. |
| 11. H.H. Rajasaheb Y. R. Ghorpade of Sandur, The Palace, *Sandur* (Mysore State). | |
| 12. Shri E. P. Gee, Evergreen Cottage, *Upper Shillong* (Assam) | |

13. H.H. Maharaja Fateh Singh P. Gaekwad of Baroda, 7-Dupleix Road, *New Delhi.*
14. Rajasaheb Bajrang Bahadur Singh of Bhadri P.O. *Bhadri,* Distt. Partapgarh (U.P.)

} Non-official.

15. H.H. Maharaja Martand Sirghju Deo, Maharaja of Rewa, Govindgarh Palace, *Rewa* (Madhya Pradesh).
16. Shri N. S. Shanmugasundram Chairman, International Farm Programme Participants, (Southern Region) *Pannaikadu P.O.* Distt. Madurai (Madras)
17. Dr. Salim Ali, 46, Pali Hills, Bandra—*Bombay*-50.
18. Shri V. N. Kak, 'Vasundhra', *Jaipur* (Rajasthan).
19. Mrs. Usha Ganguli, 10, Cavelry Lines, *Delhi*-7.
20. Prof. B. R. Seshachar, Head of the Zoology Deptt., University of Delhi, *Delhi.*
21. Dr. S. C. Law, 50, Kailash Bose Street, *Calcutta*-6.
22. Shri Humayun Abdulali, C/o Faiz & Company, 75, Abdul Rehman Street, *Bombay*-9.
23. Dr. A. B. Mishra, Flat No. C-9/2, River Bank Colony, *Lucknow.*
24. Shri P. D. Stracey, G-10, Nizammuddin West, *New Delhi*-13.
25. Shri M. D. Chaturrvedi, 8-A, Lakshmi Road, *Dehra Dun* (U.P.)
26. The Chairman, Animal Welfare Board, Gandhinagar, *Madras*-20.
27. Shri M. Krishnan, Perakulam House, Edward Elliot Road, Mylapore; *Madras.*
28. The Director, Zoological Survey of India, 34, Chittaranjan Avenue, *Calcutta.*
29. Dr. H. Santapau, Chief Botanist, Botanical Survey of India, 14, Madan St., *Calcutta*-13.
30. Director General of Tourism, Ministry of Tourism & Civil Aviation, *New Delhi.*
31. Fisheries Development Adviser, Govt. of India (Deptt. of Agri.) *New Delhi.*
32. The Director, Zoological Gardens, Alipore, *Calcutta.*

33. The Superintendent, Sri Chamarajendra Zoological Garden, *Mysore.*

34. The Wild Life Preservation Officer, Kerala State, *Peermade.*

35. The Chief Wild Life Warden, Uttar Pradesh, *Lucknow.*

36. The Director, Delhi Zoological Park, *New Delhi.*

37. The Superintendent, Victoria Garden Zoo, Municipal Corporation, *Bombay City.*

38. The Chief Conservator of Forests Andhra Pradesh—*Hyderabad.*

39. The Chief Conservator of Forests, Assam—*Shillong.*

40. The Chief Conservator of Forests, P.O. Hinoo, *Ranchi* (Bihar).

41. The Chief Conservator of Forests, Punjab—*Chandigarh.*

42. The Chief Conservator of Forests, 13, Peter Road, *Madras*-14.

43. The Secretary to the Govt. of Maharashtra, Food, Agri., Forest Deptt. Sachivalaya, *Bombay*—32.

44. The Chief Conservator of Forests, Madhya Pradesh —*Bhopal.*

45. The Chief Conservator of Forests, Orissa—*Cuttack.*

46. The Chief Conservator of Forests, Uttar Pradesh—*Lucknow.*

47. The Chief Conservator of Forests, West Bengal—*Calcutta.*

48. The Chief Conservator of Forests, Kerala—*Trivandrum.*

49. The Chief Conservator of Forests, Mysore State—*Bangalore.*

50. The Chief Conservator of Forests, Rajasthan—*Jaipur.*

51. The Chief Conservator of Forests, Jammu & Kashmir —*Srinagar/Jammu.*

52. The Chief Conservator of Forests, Eastern Wing of Kothi Building, *Baroda* (Gujarat).

53. The Chief Conservator of Forests, Himachal Pradesh —*Simla.*

54. The Development Commissioner, Delhi Administration, *Delhi.*

55. The Chief Forest Officer, Tripura Administration, *Agartala;*

56. The Conservator of Forests, Andaman & Nicobar Islands, *Port Blair.*

57. The Officer on Special Duty (Forests), Manipur Admn. *Imphal.*

58. The Director of Forests, N.E.F.A.—*Shillong.*

59. The Development Commissioner, Nagaland Administration, *Kohima.*

60. The Conservator of Forests, Goa, Daman & Diu, *Panjim;*

61. The Chief Conservator of Forests, Maharashtra State—*Poona.*

62. The Conservator of Wild Life, Punjab—*Chandigarh.*

63. The Ministry of Commerce, *New Delhi.*

## APPENDIX VII

(*Vide* para 7.16 of the Report)

*Composition of Standing Committee of the Indian Board for Wild Life*

| | |
|---|---|
| 1. Chairman of the Indian Board for Wild Life | Chairman |
| 2. Pro-Chairman of the Indian Board for Wild Life. | Pro-Chairman |
| 3. & 4. Vice-Chairmen of the Indian Board for Wild Life (two) | Vice-Chairmen |
| 5. Inspector General of Forests | Member |
| 6 to 9. Four Honorary Regional Secretaries of the Indian Board for Wild Life | Members |
| 10. One Chief Conservator of Forests by rotation for period of one year from the Eastern Region comprising the States of Assam, Bihar, Orissa and West Bengal | Member |
| 11. One Chief Conservator of Forests by rotation for a period of one year from the Southern Region Comprising the States of Andhra Pradesh, Kerala, Madras and Mysore | Member |
| 12. One Chief Conservator of Forests by rotation for period of one year from the Western Region comprising the States of Gujarat, Madhya Pradesh, Maharashtra and Rajasthan | Member |
| 13. One Chief Conservator of Forests by rotation for a period of one year from the Northern Region comprising the States of Jammu & Kashmir, Punjab and Uttar Pradesh | Member |
| 14. One Officer-in-charge of the Forest Department by rotation for a period of one year from the Centrally Administered area comprising Himachal Pradesh, Andaman and Nicobar Islands, Delhi, Goa, Manipur, Nagaland, NEFA and Tripura | Member |
| 15. The Conservator of Wild Life, Punjab | Member |
| 16. The Wild Life Preservation Officer, Kerala | Member |
| 17. The Chief Wild Life Warden, Uttar Pradesh | Member |

18. The Superintendent, Delhi Zoological Park, Delhi . . . . . Member

19. H.H. Maharaja P. K. Deo, M.P. . . . Member

20. The Deputy Secretary to the Government of India and the Secretary, Indian Board for Wild Life Secretary.

***Functions***

(i) to assess the progress made in the implementation of the recommendations of the Board;

(ii) to consider and tender advice on any difficulties experienced by the State Governments|Union Territories in the implementation of recommendations of the Board;

(iii) to appoint special committees as may be found necessary for any of the above purposes or for studying and connected questions;

(iv) generally to assist in the fulfilment of the functions of the Board.

The Standing Committee shall ordinarily meet twice between two sessions of the Board.

The Chief Conservator of Forests of Assam, Andhra Pradesh, Gujarat, Jammu and Kashmir and Himachal Pradesh have been nominated as the members of the Committee till the end of the current calender year. The other states will get their opportunity for representation on the Committee in the same order.

## APPENDIX VIII

[*Vide* para 7.23 (ii) of the Report]

*National Parks and Sanctuaries in India*

*Andhra Pradesh*

1. Pakhal Sanctuary.
2. Eturnagaram Sanctuary.
3. Pocharam Wild Life Sanctuary.
4. Qawal Sanctuary.
5. Kolleru Pelicannary (Bird Sanctuary).

*Assam*

1. Kaziranga Sanctuary.
2. North Kamrup (or Manas) Sanctuary.
3. Sonai-Rupa Sanctuary.
4. Pabha Sanctuary.
5. Garampani Wild Life Sanctuary.
6. Orang Wild Life Sanctuary.
7. Laokhawa Wild Life Reserve.

*Bihar*

1. Tabo Sanctuary.
2. Bamiaburu Sanctuary.
3. Baresand Wild Life Sanctuary.
4. Lat Sanctuary.
5. Kerh Sanctuary.
6. Hazaribagh National Park.
7. Koderma Sanctuary.
8. Betla National Park.
9. Kaimur Wild Life Sanctuary.
10. Dumka Damin Sanctuary.
11. Rajgir Wild Life Sanctuary.

*Maharashtra*

1. Radhanagari Sanctuary.
2. Singlad Sanctuary.

National Park

3. Taroba National Park.

*Gujarat*:

1. Gir Sanctuary.

*Himachal Pradesh*

1. Simla Sanctuary.
2. Simbalbara Sanctuary.
3. Renuka Sanctuary.
4. Kalatop and Khajiar Sanctuary.
5. Daranghti Sanctuary.
6. Taria Sanctuary.
7. Majhalhal Sanctuary.
8. Darlaghat Sanctuary.
9. Shilli Sanctuary.
10. Rakchum Chitkul Sanctuary.
11. Lippa Asrang Sanctuary.
12. Sh. Nainadevi Sanctuary.
13. Govind Sagar Sanctuary.
14. Nargu Sanctuary.
15. Shikari Devi Sanctuary.
16. Bandli Sanctuary.
17. Tunda Sanctuary.
18. Kugti Sanctuary.
19. Gamugul Sanctuary.
20. Sechutun Nela Sanctuary.

*Kashmir*

1. Dachigam Sanctuary.
2. Rajparin (or Dessu) Sanctuary.
3. Chumnai (Arin Valley) Sanctuary.
4. Ajjas Jheel Sanctuary (birds).
5. Shankaracharya Hill Sanctuary.

*Kerala*

1. Periyar Wild Life Sanctuary.
2. Neyyar Wild Life Sanctuary.
3. Vazhani Cum Peechi Sanctuary.
4. Parambikulan Wild Life Sanctuary.
5. Peechi Wild Life Sanctuary.

*Madhya Pradesh*

National Park

1. Kanha National Park.
2. Kheoni Sanctuary.
3. Shivpuri National Park.
4. Shikarganj.
5. Maujhar Shikarganj.
6. Shikarganj B (Naurhiya Sanctuary Block I).

7. Shikarganj C (Naurhiya Sanctuary Block II).
8. Shikarganj C (Naurhiya Sanctuary Block III).
9. Panna Sanctuary.
10. Siri Sanctuary.
11. Dubri Sanctuary.
12. Bandagarh National Park.

*Madras*

1. Mudumalai Sanctuary.
2. Vedanthangal Water Bird Sanctuary.
3. Tiger Sanctuary, Mundan Thorai.
4. Deer Park & Children Park Turnnchelli Distt.

*Manipur*

1. Keibul Wild Life Sanctuary.

*Mysore*

1. Bandipur Wild Life Sanctuary.
2. Muthodi Wild Life Sanctuary.

or

Jagar Valley Sanctuary.

3. Dandeli Sanctuary.
4. Nagarhole Sanctuary.
5. Ranganthittico Bird Sanctuary.

*Orissa*

1. Balukhand Sanctuary.
2. Chendaka Sanctuary.
3. Debrigarh Sanctuary.
4. Ushakathi (Sambalpur).
5. Khalasuri (Sambalpur).
6. Raigoda Sanctuary.
7. Mahanadi and Baisipalli (Distt. Puri)
8. Padmatala (Distt. Phulbani).

*Rajasthan*

1. Jaisamand Sanctuary.
2. Sawai Madhopur Sanctuary.
3. Sariska Sanctuary.
4. Darrah Sanctuary.
5. Ghana Bird Sanctuary.
6. Ramsagar & Ban Vihar Sanctuary.
7. Mount Abu.
8. Tal Chhapar.

*Uttar Pradesh*

National Park

1. Corbett National Park.
2. Rajaji Sanctuary.
3. Motechur Sanctuary.
4. Nanda Devi Sanctuary.
5. Govind Pashu Vihar.
6. Chandraprabha Sanctuary.
7. Malan Sanctuary.
8. Jaulasal Sanctuary.
9. Maldhan Sanctuary.
10. Tanda Sanctuary.
11. Sonaripur Sanctuary.
12. Bankatwa Sanctuary.

*West Bengal*

1. Senchal Sanctuary.
2. Lothian Island Sanctuary.
3. Gorumara Sanctuary.
4. Chapramari Sanctuary.
5. Jaldapara Sanctuary.
6. Mahanadi Sanctuary.

*Punjab*

1. Bir Ghuguana Sanctuary.
2. Bhupinder Sagar Sanctuary.
3. Bir Moti Bagh Sanctuary.
4. Bir Bhunreheri Sanctuary.

*Haryana*

1. Bir Kohli Kheri Sanctuary
2. Bir Brasson Sanctuary.
3. Bir Theh Majibullah Sanctuary.
4. Bir Shikargarh (Ambala) Sanctuary.
5. Kalesar (Ambala) Sanctuary.
6. Darpur (Ambala) Sanctuary.

## APPENDIX IX

(*Vide* para 7.23. of the Report)

*List of Protected Species*

1. Indian Lion.
2. Cheetah
3. Rhinoceros
4. Kashmir Stag.
5. Brow-antlered deer
6. Figmy hog
7. Great Indian Bustard
8. Pink-headed duck
9. White winged wood duck
10. Wild buffaloe
11. Black buck
12. Chinkara
13. Dugong and Leathery turtle
14. Elephant
15. Crocodile
16. Peacock
17. Butterflies
18. Indian Python
19. Clouded leopard
20. Four-horned antilope.
21. Indian Gazelle.
22. Indian Swamp deer.
23. Musk deer
24. Markhor
25. Spotted Lisang
26. Urial
27. Lesser Panda
28. Golden Cat
29. Marble Cat

30. Easter Pangolin
31. Golden Langur
32. Tragopans
33. Show leopard
34. White tiger
35. Rusty spotted cat
36. Caracal
37. Indian Wild Ass
38. Takin (Mishmi Takin)
39. Tiger

## APPENDIX X

*Summary of Recommendations/Conclusions contained in the Report.*

| Sl. No. | Reference to para No. of the Report | Summary of Recommendations/Conclusions |
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| 1. | 2.5. | The Committee note that in the matter of forest development schemes the Ministry have been treating the Union Territories at par with the State Governments. The Committee, however, feel that the Central Government having been vested with the overall powers over the administration of these Territories and also because of their limited resources owe a special responsibility in regard to them. The Committee suggest that the Forestry Wing at the Centre should as in the case of Andaman and Nicobar Islands take greater interest in the development of forests in the Union Territories, *e.g.* Himachal Pradesh, etc. which have large untapped forest resources so that the tempo of progress generated there, may serve as an example for the other States to emulate. |
| 2. | 2.11. | The Committee find that the strength of technical staff *vis a vis* administrative staff in the Forestry Wing is only about twenty-five per cent. The Committee consider that in view of the fact that the bulk of the work in the Wing is of a technical nature requiring special background knowledge of forestry, the proportion of the technical staff should be higher in order to ensure its more effective functioning and the administrative staff should be reduced to the minimum. They would, therefore, like that the staffing pattern is reviewed in the light of the above observation.<br><br>The Committee further recommend that special background knowledge of forestry and practical experience of forests should be prescribed as an essential qualification for the technical posts and as a desirable qualification for administrative posts in the Forestry Wing to be filled either by promotion or by direct recruitment and suggest that the rules regarding recruitment/promotion to these posts may be modified wherever necessary. |

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| 3. | 2.26. | The Committee consider the association of Ministers incharge of forests in the States/Union Territories as members of the Central Board of Forestry, which is mainly responsible for the coordination and integration of policies for the development of forests—a State subject, an ideal arrangement. They have no doubt that before long the new State of Haryana will also be represented on the Central Board of Forestry.<br><br>The Committee find that the meetings of the Board are not being held regularly every year since 1959 as was decided by the Board. Against 9 meetings which should have been held since then, only 6 meetings have been held so far. The Committee are not convinced by the reasons advanced by the representatives of the Ministry regarding the delays in holding the meetings of the Central Board of Forestry. They feel that the holding of the meetings of the Board should not be dependent on the convenience of a particular State Government to play host. It is the duty of the Standing Committee and Ministry to ensure that the meetings of the Board are held annually for which advance action should be taken to avoid delays. They hope that this will be done in future. |
| 4. | 2.27. | The Committee would like to stress that there should be no delay in the preparation of minutes which form the basis of further action on the deliberations of the Board. |
| 5. | 2.28. | The Committee further note that out of 21 State Ministers, who are members of the Board, only 10, 8 and 11 have been able to attend the last three meetings of the Board. As the meetings of Central Board of Forestry which is composed of Ministers from the States/Union Territories, provide a very useful forum for the discussions of the various problems, policies and schemes relating to the development of Forestry in the country, it would be advantageous if a larger number of Ministers incharge of forests from the States/Union Territories attend the meetings of the Board. The Committee therefore suggest that the meetings of the Board should be arranged in such a manner that the maximum number of members are able to attend. |
| 6. | 2.29. | The meetings of the Standing Committee of the Central Board of Forestry which is required to assess |

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| | | the progress made in the implementation of the recommendations of the Board, appear to have been held rather erratically. There seems to be no well thought out plan to fix the meetings of the Standing Committee between the two meetings of the Board. The Committee feel that the meetings of the Standing Committee should be spaced in such a manner that sufficient time is given to the States to implement the recommendations of the Board. |
| 7. | 2.39. | From the various proposals initially put forward for the creation of the Central Forestry Commission, it is apparent that a number of functions proposed to be assigned to the Commission fell within the purview of the Central Board of Forestry, Forest Research Institute and Colleges, Dehra Dun, and other organisations. Further, the structure suggested for the Commission on the lines of the Central Water and Power Commission, was too heavy. The Committee feel that had these proposals been sponsored with precisely defined functions and with a simple structure to suit the requirement of providing technical assistance to the Central Board of Forestry and other Central Ministries and the States/Union Territories on matters relating to forestry and soil conservation, the delay of about 10 years in this regard could have been avoided. |
| 8. | 2.40. | The Committee regret that the Commission has not made much headway in the fulfilment of the various functions which have been assigned to it. It has not held its meetings quarterly as scheduled. Since the setting up of the Commission in 1965, it has held only three meetings so far, in addition to the four regional meetings. This itself indicates the unsatisfactory working of the Commission. Further, no review of the working of the Commission after two years of its constitution, has been made as recommended by the Central Board of Forestry. The Committee recommend that a comprehensive review of the working of the Commission should be made without any further delay by a Review Committee, consisting of a few serving and retired technical personnel. The review should *inter alia* cover matters like functions to be assigned to such a body, the organisational set up best suited for the purpose of speedy and efficient execution of those functions, avoidance of over-lapping with other organisations etc. In this context, the Committee would suggest that the feasibility of entrusting functions, such as pooling and dissemina- |

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| | | tion of technical information on frestry and carrying out market studies on timber and other forest products, to the Forest Research Institute and Colleges, Dehra Dun where work of similar nature is already being done, may also be examined by the Review Committee. |
| 9. | 2.45. | The Committee note that in Europe and other countries, Poplar cultivation has been found very successful and its timber has proved useful to match, plywood and pulp factories. In view of the fact that Poplars have important commercial value, the Committee consider that full encouragement should be given to the growing of these species in different States/Union Territories where suitable conditions exist. The Committee urge that full benefit should be taken of the membership of the International Poplar Commission and that the National Poplar Commission should be activised so that it is able to perform the functions assigned to it effectively. |
| 10. | 2.47. | The Committee hope that the re-constitution of Indian Forest Service will promote *espirte de Corps* in the Forest Service and also accelerate the pace of integartion of Forest Policy. |
| 11. | 3.4. | The Committee regret to note that since the adoption of the National Forest Policy Resolution in 1952, the total addition to forest area in the country till 1966-67 *i.e.* over a period of 15 years has been of about 2 million hectares, registering an increase of only 6 per cent. in the forest area. The proportion of the forest area to the total land area in the country still lags far behind the target of 33.1/3 per cent. set in the National Forest Policy Resolution. Thus the progress increasing the forest area in the country is far from satisfactory. The Committee urge that effective steps should be taken by the Central Board of Forestry which is composed of representatives of the States/ Union Territories to increase the forest area in the various States where possibilities therefor exist. |
| 12. | 3.12. | From the statistics of the area under forests in the various States/Union Territories, it is evident that the forest area is below 4 per cent. of the total land area in Haryana and Punjab and below 10 per cent. in Delhi and Jammu and Kashmir. The position in Gujarat, Rajasthan and West Bengal is also far from satisfactory. The Committee realise that there may |

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| | | not be equal scope for extension of the forest areas in all regions and States. It is, therefore, very essential that the proportion of the area that ought to be under forests in each State/Union Territory should be clearly indicated. It is regrettable that this has not been done so far although in the First Five Year Plan the Central Board of Forestry was made specifically responsible for this work. The Committee strongly recommend that Central Board of Forestry should take urgent measures in this behalf and try to complete the work by a specified time. The Committee have no doubt that this will greatly help in extending the forest area in the various States/Union Territories. |
| 13. | 3.18. | The Committee deplore that while the desirability of a detailed survey of all lands as a basis for evolving a system of balanced and complementary land use was stressed in the National Forest Policy Resolution, such a survey has not been undertaken so far and thus a very important plank of the Policy has been left unattended to. They also regret the failure of the Government either to draw up a long term plan or to undertake a reconnaissance survey of waste lands with the specific object of extending the forest area, as suggested in the First Five Year Plan. The Committee consider that this work cannot entirely be left to the States. They strongly recommend that the Government should accord priority to this question and formulate a systematic programme to carry out a multi-pronged country-wide land survey, in consultation with and the cooperation of the State Governments which should be assisted to implement the programme. This would not only help in the reclamation of waste lands but would also ensure rational land use and integrated approach to planning. |
| 14. | 3.25. | The Committee are unable to appreciate the reasons for not undertaking any specific programme of tree plantation under the land Transformotion Programme other than the annual *Vana Mahotsava* the progress of which is primarily based on voluntary efforts. The Committee recommend that a well-coordinated scheme, which may *inter alia* include tree plantation under annual *Vana Mahotsava*, or increasing the tree-lands in the country as envisaged in the National Forest Policy Resolution, may be formulated by the Central Board of Forestry and commanded to the State Governments for implementation. |

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| 15. | 3.26. | The Committee note that on an average about 54% of the trees planted under *Vana Mahotsava* have survived. In the absence of any physical verification or test check, they are doubtful if so high a percentage of survival is correct. It is common knowledge that the trees planted ceremonially with all the official pomp and show during *Vana Mahotsava* week are not later on properly protected and cared for and a large number of them wither away. The Committee need hardly over-emphasize the importance of proper and adequate after-care in the case of tree planting. The Committee suggest that the Central Board of Forestry may devise suitable steps to ensure that the trees planted during *Vana Mahotsava* are properly looked after and the statistics of survivals are maintained as accurately as possible. |
| 16. | 3.27. | The *Vana Mahotsava* was supposed to play a vital role in creating mass consciousness as to the importance of the forests in the national re-construction and development both from the point of view of their protective as well as productive functions and with that end in view was intended essentially to be a people's movement. The National Forest Policy also stipulated that encouragement should be afforded to *Vana Premi Sangh*. The Ministry, however, have no information about the existence of these *Vana Premi-Sanghas*. The Committee are distressed to observe that the public enthusiasm exhibited all over the country in the initial stages of *Vana Mahotsava* is fading away and people's participation in it, which is the index of the extent to which the programme has fulfilled its objective, is becoming negligible. The Committee share the widely-prevalent feeling that the whole programme has now been reduced to merely a symbolic action. The Committee urge that the Central Board of Forestry should consider the matter in all its aspects to find out ways and means to revitalize the whole programme so as to stimulate public initiative and participation in this programme. The feasibility of enlisting the support of local bodies, educational institutions and other voluntary organisations in this programme also needs examination. |
| 17. | 3.31. | The Committee are surprised that no demarcation of forests on functional classification as laid down in the National Forest Policy Resolution of 1952, has yet been made. The Committee cannot over-emphasise the importance of functional classification of forests which is necessary to focus attention on the kind ond object of management necesary in each case. They therefore suggest that necessary steps should be taken |

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| | | to demarcate forests on functional basis and to collect statistics in regard thereto as maximum benefits can be derived only after the forests have been classified functionally and are managed to fulfil those specific functions. |
| 18. | 3.41. | The Committee regret to note that an area of about 11 lakh hectares under forests has been lost since 1951 for cultivation and other developmental projects etc. in the country. No attempts have simultaneously been made to bring an equivalent area under forest as stipulated in the First Plan and recommended from time to time by the Central Board of Forestry. It appears that the data furnished to the Committee is also incomplete. The Committee feel very much concerned over these continuous inroads into the forest area which is already below the required proportion laid down in the National Forest Policy. In their opinion, if the trend is allowed to continue unchecked, the situation may assume alarming proportions particularly in States having a small forest area. The Committee therefore strongly recommend that Government should immediately pay serious attenion to this problem and take effective measures to ensure that simultaneous steps are taken to afforest suitable areas equal to those which have to be deforested on account of the implementation of plan projects etc. The Committee suggest that besides exploring other avenues, this matter may be considered by the National Development Council which is an appropriate forum for taking decisions on such important matters. |
| 19. | 3.56. | While the Committee recognise that the development or reclamation of arid regions is a long term process involving large scale resources, they are constrained to observe that the progress achieved since 1952 in this regard has not been satisfactory. They hope that with the establishment of the Desert Development Board, the problem would receive adequate attention and concerted and sustained efforts would be made to ensure rapid development of these areas. The Committee would like to stress that the execution of the pilot projects should be periodically reviewed by the Board to keep at watch on the pace of their progress and to ensure efficiency in their execution. |
| 20. | 3.67. | The Committee note that approximately half of the forest area in the country has been brought under working plans. Out of the remaining half, about 41.9 |

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| | | per cent of the total forest area is under controlled exploitation and 8.4 per cent is without any management plan. Now that a permanent organisation equipped with technical personnel to deal with working plans has been set up in each State, the Committee have no doubt that concerted efforts would be made to accelerate the progress in regard to the preparation of working plans for the remaining areas also, so as to ensure scientific management of the forests. They would suggest that the feasibility of laying down annual target for covering the remaining forest area by working plans in each State may be examined and the progress thereof watched. |
| 21. | 3.68. | The Committee are glad to note that the Central Forestry Commission is working on the All India Working Plan Code. They hope that efforts would be made by the Forestry Commission to complete the work at an early date. |
| 22. | 3.72. | The Committee feel concerned over the inordinate delay of nearly a decade in the collection of information regarding preparation of maps and atlases. The importance of forest maps as an essential prerequisite to planning needs hardly any emphasis. The Committee suggest that the question of collection of information in respect of the concerned States may be taken up at the appropriate higher level and efforts made to complete the work at an early date. |
| 23. | 3.80. | The very fact that the Central Board of Forestry has had to adopt a resolution on forest grazing in 1966 *i.e.* after the lapse of a period of fourteen years since the formulation of the National Forest Policy, shows that the guidelines set out therein have not been followed by all the States. In this connection the Committee would like to recall the resolution adopted by the Central Board of Forestry at its meeting held at Madras in May, 1955, endorsing generally the recommendations of the Fourth World Forestry Congress and *inter alia* recommending that a special study of forest grazing in the country should be carried out by the Centre. The Committee regret to point out that such a study has not been undertaken so far. They strongly recommend that urgent steps be taken to carry out a special study of the whole problem so that a sound grazing policy is evolved and adopted by the Forest Administration in the States suiting to the conditions obtaining in each State. |

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| 24. | 3.81. | The Committee realise that the very large livestock population in the country is the main obstacle in controlling grazing in the forests. Further liberal concessions and cheap forest grazing fees—as low as 0.25 P. per animal per annum—are not only detrimental to forests but are primarily responsible for the present low-utility value of the stock. The Committee, therefore, feel that while the fundamental principles enunciated in the National Forest Policy still hold good, it would be desirable to find out ways and means to regulate the number of livestock and carry out studies to determine (1) the best method of graging, *viz.* rotational, intermittent, etc., (2) present and future grazing potentials, and (3) possibilites and implications of increasing the grazing fee and of categorising the livestock for assigning priority for admission to grazing. |
| 25. | 3.82. | The Committee consider that in implementing a sound grazing policy it is essential to seek the willing cooperation of the villagers. For this purpose suitable measures should be taken to educate the villagers and demonstrate to them the advantages of scientific rotational grazing blocks, keeping cattle in areas specially assigned for them and having quality livestock. |
| 26. | 3.87. | The Committee realise that shifting cultivation is an age-old practice with the tribals and aboriginals which can be replaced only gradually, having due regard to the susceptibilities of the people pursuing it and that any programme in this direction has to form part of a wider plan for the tribal welfare. At the same time, they feel that concerted efforts have not been so far as to wean away these people from this practice. In the opinion of the Committee, besides introducing agro-silviculture measures with the provision of necessary opportunities and facilities, steps should be taken to provide tribals with alternative means of livelihood. In this connection, the Committee reiterate the observations made in the report of the Dhebar Commission on Scheduled Areas and Scheduled Tribes (1961) that "The Forest Department, as a branch of Government, should consider itself responsible for the development of the tribals as well as the forest areas. It should not think in terms of an exclusive obligation to trees or vegetation but should also accept an obligation to utilize the forests as much as possible from the angle of the economic development of the tribes residing in it. In return |

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| | | the tribals should recognize the need to preserve the forests. An essential feature of this new approach is that the forest department should undertake the responsibility of giving adequate employment to the tribals living in and around the forest areas. Development of forests and the betterment of the tribals should no longer be at loggerheads. They have to go hand in hand". |
| 27. | 3.93. | The Committee regret to note that no follow up action has been taken by the State Governments to watch the speedy implementation of the recommendations of the Sub-Committee of the Central Board of Forestry made in December, 1963. They hope that the matter would be pursued vigorously by the Central Board of Forestry with the State Governments to persuade them to bring their forest laws in conformity with the aforementioned recommendations of the Sub-Committee as early as possible. Further in order to protect the forest wealth from the damage often caused by the exercise of unfettered rights available to the local habitants under customary laws in certain States, the Committee suggest that the feasibility of regulating/restricting these rights by providing suitable assistance to the affected parties so as to avoid hardships to them, may be examined by the Central Board of Forestry in consultation with the representatives of the concerned State Governments. |
| 28. | 3.97. | The Committee note that the area of private forests in various States/Union Territories is quite small as a result of the enactment of Zamindari Abolition and other Land Reforms laws by the States. They are glad to note that the States have generally enacted special laws in order to regulate the control and management of the private forests. |
| 29. | 3.109. | The Committee note that the sinking fund for the development of forests, which was recommended in the National Forest Policy Resolution has not yet been created for various reasons. They further note that compared to forest revenue, the proportion of expenditure on development of forests in the States during the three Plan periods has ranged between 41.6 per cent to 52 per cent only. They understand that the revenues earned by the State Governments under a particular head are not made available for expenditure under the same head as they are pooled towards total Plan resources for financing the various plan schemes. The Committee feel that in the inter- |

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| | | est of the development of forestry which is a long term process but is essential for the economic and agricultural prosperity of the country, there is need to provide adequate funds on a continuous basis to achieve the desired results. In this connection they would suggest that the methods followed in other countries for financing forest development may be considered by the Central Board of Forestry for adoption in the country with the necessary modifications. The Committee would further suggest that adequate financial provision should be made to raise plantations in equivalent areas when large scale forest areas are submerged or deforested for river valley and industrial project etc. |
| 30. | 3.111. | The Committee are of the opinion that it is high time that a re-appraisal of the National Forest Policy be made by an *ad hoc* body of experts in the light of experience gained during these seventeen years and the research and technological advancements made in the international field of forestry and suggest other suitable changes in the existing policy as to make the new revised policy a more purposeful, realistic and effective apparatus for the development of forests and forestry in the country. |
| 31. | 4.12. | The Committee note that there has been persistent shortfalls in expenditure compared to financial provision made for the development of forestry schemes during the three Plan periods, both in the Central and State sectors. The extent of shortfalls was of the order of Rs. 201.20 lakhs, Rs. 231.66 lakhs and Rs. 401.62 lakhs respectively during each of the three Plan periods in both the sectors. The shortfalls in the Central Sector amounted to Rs. 100 lakhs, Rs. 48.45 lakhs and Rs. 152.84 lakhs and in the State Sector Rs. 101.20 lakhs, Rs. 183.21 lakhs and Rs. 248.78 lakhs respectively. The Committee further note that in some of the States like Gujarat, Jammu and Kashmir, Kerala, Madhya Pradesh and West Bengal etc. the shortfall has persisted in each of the three Plan periods. The Committee are concerned over these non-utilisation of plan provisions particularly when one of the major handicaps in the development of forestry in the country is stated to be inadequate provision of funds. They consider that if the schemes had been formulated properly and timely coordinated action taken for their implementation, it should have been possible for the Centre as well as the States to |

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| | | utilise the provisions fully. The Committee are, however, glad to note that during 1967-68 there has been full utilisation of the funds made available for the development of forestry both by the States as well as the Centre. The Committee hope that this trend would be continued. They would urge that the schemes to be included in the 4th Plan should be formulated after detailed scrutiny in the light of past experience and provision and targets should be fixed on a realistic basis. |
| 32. | 4.24. | The Committee are happy to note that in undertaking the pre-investment survey of forest resources, an attempt has been made towards a more intensive utilisation of our forest wealth. They have no doubt that the survey would provide useful data regarding the availability and distribution of different types of raw materials in the concerned forest areas which would help in meeting the shortage of raw material for forest-based industries in the country. It will also throw light on the measures required for the full development of these forest areas. The Committee hope that immediately after the finalisation of the project report by U.N. Experts, speedy steps would be taken to process it further in cooperation with the Director General of Technical Development for the preparation of feasibility reports for the establishment of new forest-based industries and expansion of the existing ones. |
| 33. | 4.25. | The Committee are also happy to note that the pre-investment survey scheme is proposed to be extended during the Fourth Plan. There are vast areas still lying untapped which offer potentialities for the development of forest-based and other industries. The Committee trust that the physical and financial targets to be fixed for the Fourth Plan would be completed and that they would provide continuous and further reliable information regarding the existing and potential sources of raw material for forest-based industries in the country. |
| 34. | 4.38. | The Committee consider that one of the major bottlenecks in the Indian Forestry has been the age old technique of incomplete harvesting of wood resources which involved wastage. These methods were evolved at a time when such wastage could be afforded as there was not much demand for wood and the forest resources were abundant. Today, when |

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| | | in view of the growing population pressure and advanced modern living, the gap between supply and demand of wood has widened, its efficient use like that of other scarce raw materials is a pre-requisite for economic prosperity. It is necessary that all wastage of wood is reduced to the minimum by improving logging methods. The Committee are glad to note that the logging Training Project has been taken up by the Government of India in collaboration with the United Nations Development Programme and Food & Agricuture Organisation for training Indian forestry personnel in the various specialised fields of logging operations. The Committee have no doubt that this project will result not only in the increasing use of latest logging techniques and methods for the extraction of timber but will also considerably reduce wastage of timber involved by the use of age old techniques of timber harvesting in the country. |
| 35. | 4.39 | The Committee are, however, unhappy to observe that except Dehra Dun Centre which started functioning from the middle of September, 1965, the other four Centres were set up six to eighteen months after the commencement of the Project. The delay in setting up these Centres has had its adverse effect on the number of persons trained in various courses as is evident from the fact that while out of the total period of four years of the Project, about three years and a quarter have already expired, the percentage of trainees turned out in the courses of Basic Logging, Planning and Studies, Operation & Maintenance of mechanical logging equipment and operation & Mainteance of Portable Sawmills has been only 64, 54, 57 and 43 respectively of the targeted figures. The Committee hope that such delays would be avoided in future. |
| 36. | 4.40. | The Committee note that the number of trainees from nearly half of the States *viz.* Assam, Bihar, Kerala, Orissa, Punjab and Rajasthan and Union Territories of Andaman and Nicobar Islands and Manipur is negligible. From Nagaland and some of the Union Territories like Tripura, Goa, Daman & Diu etc. not even a single person has so far received any training at the Project. They suggest that efforts should be made to persuade these States and Union Territories to sponsor adequate number of persons to avail of the training facilities in the various courses of the Project. |

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| 37. | 4.41. | The Committee further note that training of workers by the Instructors who have reverted to their respective States after getting training under the Project, is being followed up by the foreign experts. They also note that after the completion of the Project in August, 1969, the training programme is proposed to be continued by the Forest Research Institute & Colleges, Dehra Dun and that a scheme for the purpose is being included in the Fourth Plan. They recommend that while fixing the financial and physical targets for the proposed scheme, the present as well as future needs of all the States/Union Territories should be properly assessed and taken into consideration. It would also be advisable to watch training utilisation in the harvesting operations in the States and provide for refresher courses for trained personnel. |
| 38. | 4.50. | The Committee are distressed to find that while the need of introducing modern harvesting techniques and manufacturing latest logging tools within the country has been felt for a long time both by the Central as well as State Governments, no serious efforts were made in that direction till 1965. The Committee need hardly emphasize that the *sine qua non* of the successful forest management is the harvesting of forest products at the minimum cost and with the least wastage, which is possible only through conducting these operations by trained personnel, equipped with modern tools. The question of manufacturing these tools within the country itself and making them available in adequate number to the contractors, cooperative societies and Corporations etc. engaged in the harvesting operations has assumed added importance in view of the training imparted at the Logging Project and deserves attentior on a *priorie* so that the trained personnel are able to put into practice effectively and fruitfully the benefits of their training. The Committee recommend that urgent steps should be taken to speed up the manufacture of latest logging tools within the country. For this purpose it is advisable that an assessment of the demand for these tools is made on a long term basis and arrangements made for the manufacture and supply of requisite quality of steel to the tool manufacturers. At the same time, effective measures should be taken to standardise the tools so as to bring down their cost of manufacture. |
| 39. | 4.63. | The Committee note that the percentage survival of the plantations raised under the scheme, as reported by |

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| | | the States, ranges between 74 to 81. The Committee further note that the Central grants under the scheme are released to the States on the basis of the area planted with quick growing species and the expenditure incurred in that connection duly certified by the Accountant General. The Technical Advisers of the Centre, who visit the States, do not even undertake a physical random check as to the area reported to have been brought under these plantations. The Committee feel that in such cases, it is desirable that a physical check at least on a random basis, as to the area actually planted, is made by the Technical Officers of the Centre. Such a physical verification would not only ensure proper utilisation of the grants-in-aid given to the States but also the after-care of the plantations raised.<br><br>It is observed that out of 15 States and 2 Union Territories where plantations of these fast growing species have been raised, the proposals for their utilisation by the existing or proposed paper or pulp units seem to be confined only to 5 or 6 States. The Committee suggest that a survey of the plantations raised in other States should also be undertaken with a view to their profitable utilisation. |
| 40. | 4.68. | The Committee are happy to note that survey of forest resources in the States has been undertaken. They hope that quick steps would be taken to complete the survey as early as possible, as this would be go a long way for the development of forest industries in the country. They further hope that necessary coordination between the study undertaken at the National level and at the States level would be ensured so as to obviate duplications of efforts.<br><br>From the allocations recommended by the Working Group for various States for the Fourth Plan, the Committee find that no provision has been made for Nagaland State and the Union Territories, particularly, Andaman and Nicobar Islands and Himachal Pradesh which have rich forest resources. The Committee are unable to understand the reasons for their exclusion and feel that the scheme should be extended to those Territories also. |
| 41. | 4.72. | The Committee are happy at the work done and progress achieved in raising economic plantations of industrial and commercial value by the States. They hope |

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| | | that sustained efforts would continue to be made to raise these plantations in order to meet the perspective requirements of industrial wood for wood-based industries. |
| 42. | 4.76. | The Committee are glad to note that continuous progress is being made under the scheme to rehabilitate degraded forests in the country. They realise that the forest areas to be covered under this scheme are very vast. They hope that sustained efforts will continue to be made to rehabilitate and afforest the remaining areas according to a phased programme. |
| 43. | 4.84. | The Committee note that large forest areas particularly some of the rich forests at the higher elevations in the Himalayas and other mountainous regions, remain still unexploited or partly exploited on account of inaccessibility of those regions. It is well known that lack of communication facilities results in reduced forest produce and increased cost of extraction. If all these areas are opened up with a good communication system capable of being used throughout the year, it would be possible to increase forest produce considerably and manage the forests efficiently. The Committee would, therefore, strongly recommend that special efforts should be made to accelerate the programme of improvement of communications to link up forest areas. |
| 44. | 4.95. | The Committee are unhappy at the slow progress of the Scheme of Farm Forestry-*cum*-Fuel Wood Plantations. They note that low rate of subsidy, absence of a well-defined agency to implement the scheme and non-earmarking of suitable areas for raising plantations under this scheme, were the main reasons for this. The Committee are constrained to observe that even though the poor progress of the scheme had been brought to the notice of Government during the currency of the Third Plan itself and the reasons therefor were also identified, no serious attempt was made to accelerate the progress of the scheme by removing the deficiencies. |
| 45. | 4.96. | The importance of farm forestry to the rural economy of the country cannot be over-emphasised. Farm forestry is necessary to provide firewood to the villagers so as to release cow-dung for manure as well as to yield small timber for agricultural implements. The Committee consider that the success of this scheme lies mainly in invoking the willing cooperation of the villagers through proper publicity and by providing neces- |

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sary technical guidance and help to them by the Forest and other Departments. In this connection the Committee would also like to reiterate the recommendation of the Energy Survey Committee of India that "immediate and active measures should be taken jointly by the Government of India and State Governments to formulate and implement the policy for expanding the growth of quick growing timber suitable for use as firewood."

The Committee hope that necessary steps would be taken by he Government to make a success of this scheme during Fourth Plan period.

46. 4.112. The Committee are constrained to observe that the progress made in the reclamation of ravines in the country has been far from satisfactory. Out of a total area of about 20 lakh hectares covered by ravines, the area afforested so far is about 56,700 hectares. The existance of ravine lands has not only created law and order problem in some of the States but has also affected the economic growth and agricultural production of those areas. The Committee regret that in the past reclamation of these areas has not received adequate attention. They are, however, glad to note that a Central Ravine Reclamation Board has now been constituted for ravine control and reclamation. They hope that the Board will now undertake this work in right earnest and will ensure a proper check on the further growth of ravines and the rapid development of these areas.

47. 4.117 The Committee consider that the absence of adequate permanent vegetative cover to protect the water sheds would result in excessive silt deposit which would adversely affect the costly dams. The Committee, therefore, recommend that various aspects relating to erosion and sedimentation of catchments should be studied and timely protective measures taken.

48. 4.129. The Committee regret to note that the productivity of Indian forests is a little over 0.5 cubic metres per hectare as against the world average of 2.00 cubic metre per hectare and the European average 2.50 cubic metre per hectare. They note that the potential productivity of Indian forests is estimated to be 5.00 cubic metre per hectare *i.e.* ten times of the present productivity. The main reasons for low productivity is stated to be the existence of large forest areas which are

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| | | poorly or very poorly stocked. The Committee are surprised that so far no survey of the forest areas, which have not been stocked at all, has been made The Committee need hardly emphasise that determined efforts are required to be made to incerase the productivity of the forests. The need for increasing productivity is all the more greater as the requirements of industrial and other woods in the country are increasing at a much faster rate than their availability. The Committee recommend that efforts should be intensified to re-stock the existing forest area which are poorly stocked or not stocked at all and to reclaim deforested areas so as to increase the productivity of forests in the country. |
| 49. | 4.137 | The Committee need hardly over-emphasize the importance of periodical evaluation of developmental schemes, particularly in a long term venture like forestry which involves large scale and long-term investment and requires constant after-care. They therefore, suggest that the Central Government in consultation with State Governments should explore the feasibility of constituting an *ad hoc* team consisting of eminent experts to evaluate the progress made under various forest development schems all over the country and make suggestions for improvement. The team should visit the representative areas under different plantations in the States/Union Territories for physical assessment with a pre-planned programme and submit their report within a stipulated time. The Committee have no doubt that such an evaluation would not only help the State Forest Departments in improving their efficiency but would also ensure that public funds are utilized properly. |
| 50. | 4.148. | The Committee are greatly concerned that even after a period of more than a decade and half since the declaration of the National Forest Policy, statistical data in the various fields of forestry are either not available or where available are inaccurate or inadequate. For example statistics relating to forest area in the hilly regions and plains, area according to functional classification, etc. are not available with the Ministry. Surprisingly, as mentioned in the First Five Year Plan that 'accurate statistics regarding the area under forests are not available', the position regarding the non-availability of forest statistics remains more or less the same even |

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| | | today. The extent of forest area in the country is a matter of uncertainty if not a guess work altogether. Other important aspects in respect of which satisfactory data is not forthcoming are: the area deforested for various uses since the formulation of the National Forest Policy, extent of forest reosurces, rate of growth, consumption and demand trend of forest based industries etc. The States which are the primary agency for furnishing the statistics do not have by and large any machinery to collect such statistics methodically and hence the information required to be furnished by them is very after delayed. |
| 51. | 4.149. | In the opinion of the Committee, it is imperative that a high priority is accorded to a well-designed programme to improve data gathering and data processing so that reliable statistics are readily available for the formulation of policies and plans and to evolve methods and techniques for evaluation and supervision over the progress of their execution. The Committee have no doubt that such statistics will provide many insights on the use and productivity of the country's forest resources in satisfying the needs of her economy. The Committee therefore suggest that a well-organised machinery equipped with technical staff and other resources should be available both at the Centre as well as in the States. The Committee also recommend that the past performance of the Statistical Cell in the Central Forestry Wing should be specially scrutinised alongwith the review of the working of Central Forestry Commission as suggested earlier. They strongly feel that the setting up of the Statistical Cells in States/Union Territories brooks no further delay and the question should be taken up at an appropriate higher level to expedite their creation. They also suggest that the basic programme of urgently needed information should be drawn up by the Central Forestry Commission for priority action in order to ensure a steady flow of uptodate data. The format for the collection etc. of the data should be linked up with the National Forest Policy Resolution as far as practicable and useful. |
| 52. | 5.24. | As the working of the Forest Research Institute and Colleges has been reviewed thoroughly by the Second Expert Committee and a report submitted in 1966, the Committee have not considered it necessary to examine the same matter again. They are, however, |

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| | | constrained to observe that although a period of more than two years has elapsed, Government are still considering the recommendations made by the Expert Committee and have done little to implement them. In this connection, the Committee are distressed to note the observation of the Second Expert Committee that, 'Its general conclusion was that very little has been done so far on some of the important recommendations of the First Expert Committee and whatever organisational steps were taken, were neither in conformity with the recommendations of the First Committee nor did they help in improving the work of the Institute'. The Committee need hardly emphasise that unless quick decisions are taken by Government on the recommendations made by an expert body, and the same are implemented expeditiously and faithfully by the Government, the very object of appointing such a body is bound to be defeated. The Committee would urge upon the Government to finalise their decisions on all the recommendations of the Second Expert Committee which have already been delayed, and take speedy steps to ensure their early implementation. |
| 53. | 5.32. | The Committee are concerned at the adverse remarks made by the Second Expert Committee on the working of the Forest Research Laboratory, Bangalore. They would recommend that the programme and working of this Laboratory should be closely watched and suitable facilities regarding necessary equipment and staff provided to it to make it an effective and useful research centre. |
| 54. | 6.28. | The Committee note that while the demand of industrial wood in the country has been estimated at 22 million and 50 million cubic metres in 1975 and 1985, its production is expected to be 11.9 million and 31 million cubic metres respectively. There will thus be a gap of the order of about 10 million cubic metres in 1975 which will widen to 19 million cubic metres in 1985. This underlines the need for a vigorous drive and dynamic approach to organise extensive plantations of industrial woods like teak, soft wood, eucalyptus etc. to cater to the growing demand of forest-based industries. The Committee hope that the implementation of Pre-Investment Survey and Resources Survey Schemes would throw up new and unexploited forest resources to fill this gap to some extent. |

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| | | The Committee would like to emphasise the need to utilise all types of available wood by the wood-based industries. This calls for extensive and intensive research in the utilisation of various types of inferior woods available in the country . In this connection the Committee are inclined to agree with the recommendation made by the Development Council for Paper, Pulp and Allied Industries in their Annual Report of 1967-68 that "There are appreciably large untapped resources of mixed tropical woods in different parts of the country. Efforts have already been made by some of the Paper Mills to utilise such hard woods and have met with some success. However, further research work is required before this can be established as a suitable source of raw material. The Forest Research Institute should be requested to take up the question of evolving suitable process for pulping of mixed hard woods as well as the mixtures of such hard woods and bamboo." |
| 55. | 6.39. | It is well known that Indian forests are very rich in minor forest products and provide ample scope for their further growth and development. Many of these products like lac, sandal wood and medicinal herbs etc. are also good foreign exchange earners. The Committee urge that vigorous and sustained efforts should be made for the development of minor forest products. |
| 56. | 6.48. | The Committee note that the Railways are going in for concrete or steel sleepers in place of wooden sleepers to meet some of their requirements as the cost of wooden sleepers has increased considerably. This has resulted in the decline of the demand for wooden sleepers by the Railways. They however understand that in certain circumstances, there is no substitute for wooden sleepers which are insulated and hence the same would continue to be used by the Railways. The Committee urge that efforts should be made to find export markets for the types of sleepers whose demand by the Railway is declining. |
| 57. | 6.60. | The Committee note that the export of major and minor forest products in 1967-68 stood at Rs. 77.5 million and Rs. 129.21 million respectively. During the same year the import of major forest produce was Rs. 301.57 million, and minor forest produce Rs. 21.64 million. Thus the import of major and minor forest products is still of a very high order. The Committee feel that there is considerable scope for increasing the exports and reducing the imports of forest produce. |

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| | | They urge that vigorous efforts should be made in this direction. In this connection the Committee suggest that the feasibility and utility of organising a separate export cell under the I.G. Forests for collection and dissemination of information in this regard, may also be examined. |
| 58. | 7.22. | The Committee note that the meetings of the Board are not held according to prescribed schedule. As provided in the constitution of the Board, it is required to meet once in two years and accordingly since its inception in 1952 at least eight meetings should have been held uptill now. But so far only six meetings have been held. Even the first meeting was held after the expiry of a period of about seven months of the constitution of the Board. The sixth meeting which the Board held last was in June, 1965. It has not yet been possible for the Board to meet since.<br><br>While the record of meetings of the Board is poor, that of the erstwhile Executive and the Standing Committee is no better. Since its inception it is supposed to have met at least 18 times, actually it has held 9 meetings so far. Except the 3rd, 4th and 5th meetings of the Executive Committee, all others have been held after a gap of 2 to 3 years.<br><br>The Committee are surprised that no information as to the attendance of members at the Fourth and Fifth meetings of the Board and at all the meetings of the Executive/Standing Committee and the two Sub-Committees, *viz.*, Bird Wing and Zoo Wing is available with the Ministry. The attendance at the four meetings of the Board for which the Ministry have been able to furnish information is not very encouraging either. In particular, the attendance of the representatives of the States/Union Territories as compared to their total membership has been extremely poor.<br><br>The Committee cannot help feeling that there is lack of planning in convening the meetings of the Board and the Standing Committee. They fail to understand how in these circumstances it is possible for the Standing Committee to discharge the vital function of watching the implementation of the recommendations made by the Board.<br><br>The satisfactory as has been the performance of the Board and the Standing Committee in the matter of holding meetings, that of the three Sub-Committees, *viz.*, Zoo Wing, Bird Wing and Publications Sub- |

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| | | Committee has been worse still. Instead of having had 17 meetings each to its credit, the Zoo Wing has met only once and the Bird Wing only thrice. The Publications Sub-Committee has not even met once. All this indicates that there is lack of purpose behind the whole scheme of the Board and its various Committees or absence of will on the part of the Board to achieve the objective set down for it. |
| | | The Committee are inclined to think that such a situation has arisen for want of an efficient Secretariat with the Board. They are glad to be informed that a Wild Life Cell has recently been set up in the Forestry Wing with an Assistant Inspector General of Forests at its head. The Committee recommend that this Cell may be strengthened suitably so that the working of Indian Board of Wild Life is put on a regular and sound footing. |
| 59. | 7.24. | The Committee are not at all happy at the achievements of the Board during the seventeen years of its existence. Despite what little the Board has been able to do, alarming complaints and reports continue to be heard from knowledgeable persons including Wild Life experts from foreign countries that Wild Life in India is in grave danger of extinction. |
| | | The Committee are concerned to note that a number of recommendations made by the Board are yet to be implemented by some of the States. Although the Board at their first session in 1952 commended to each State to set up a State Wild Life Board, yet such Boards have not so far into existence in two States and three Union Territories. Orissa and the Union Territory of Tripura have yet to have a wild life legislation as advised by the Board. The Committee regret that despite repeated resolutions of the Board problems such as effective control on poaching, commercial transactions in game meat, use of crop protection guns, protection to wild life in areas outside reserved forests etc. still await their solution. The Committee are not also satisfied with the publicity measures so far taken to educate the public about wild life. They are convinced that there is urgent need to activize and revitalize the Board and its various Committees by a thorough overhauling of its existing administrative set-up. |
| 60. | 7.30. | The Committee need hardly emphasize that a nation's fauna is as important as its flora. It is part of nature's treasure and even where it does not provide food or skin or some other produce of direct economic |

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| | | value, it adds to the scenic beauty of the countryside and to the joy of life. There is a large variety of fauna that is peculiar to this country and Indian myth and legend teem with animal love. In this context, the Committee feel that a lot is left to be desired in the field of conservation and management of wild life in the country. They are accordingly inclined to agree with most of the recommendations made at the Planning Commission meeting held on the 23rd April, 1965, more particularly the one regarding set-up of the Board. The Committee recommend that immediate steps be taken to appoint an *ad hoc* Committee to review the progress so far made towards the protection and preservation of wild life and suggest measures to improve the working of the Board so as to make it an effective body. The Reviewing Committee may *inter alia* go into the following matters:—<br>(i) enunciation of a well-defined wild life policy;<br>(ii) organisational set up to render assistance to the Board.<br>(iii) review of the list of protected species;<br>(iv) effectiveness of existing wild life laws;<br>(v) pattern of national parks and sanctuaries;<br>(vi) facilities to be created for higher level education in wild life management;<br>(vii) facilities for promotion of wild life tourism. |
| 61. | 7.34. | The Committee find that nothing has yet been done in regard to ecological survey of wild life and necessary research on the subject, even though this happens to be one of the important functions of the Board. They learn that so far census has been undertaken only in respect of a few species like Gir lions, rhinos and in some places of the elephants, by the States concerned. The Committee are of the opinion that a census of other species of wild life, whose population is considered to be diminishing, should be undertaken urgently so as to initiate effective measures for their protection. They feel that a phased programme in this regard should be drawn up and its execution undertaken by the Centre, instead of leaving it to the States. |
| 62. | 7.43. | The great variety of wild life existing in the country can greatly help in attracting foreign tourists and thereby promoting the cause of tourism in the country. Wild Life sanctuaries can be developed for attracting destinational traffic. The Committee regret to note |

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| | | that the main difficulty in this regard is stated to be limitation of transportation facilities to the sanctuaries, lack of adequate accommodation and professional experience to identify animals and birds. The Committee note that the Department of Tourism is considering the question of appointing a National Committee and the constitution of a National Conservation Service for the preservation of wild life and developing facilities for wild life tourism. They feel that had the Board for Wild Life and its Standing Committee and Sub-Committees been active, such a proposal would not have been mooted by the Department of Tourism. In the opinion of the Committee the appointment of another Committee or the creation of a separate service for wild life would not solve the problem, it may rather lead to duplication and overlapping. What is needed is a determined effort to make the Board for Wild Life an effective instrument for the conservation and preservation of wild life in the country and training forest service personnel in wild life and making them specifically responsible for their conservation in Sanctuaries and National Parks. |
| 63. | 2.44. | The Committee further suggest that a programme for the development of National Parks and sanctuaries and creation of facilities to attract foreign tourists should be worked out in closer coordination and consultation with the Department of Tourism which can also assist in the development of rest houses and roads in the sanctuaries.<br><br>The Committee have already recommended the appoint of an *ad hoc* Committee to review the working of the Board for Wild Life. They recommend that this aspect should also be considered by that Committee. |

## APPENDIX XI

(*Vide* Introduction)

*Analysis of Recommendations/Conclusions contained in the Report.*

I. CLASSIFICATION OF RECOMMENDATIONS

A. *Recommendations for improving the Organisation and Working* :
Serial No. 3, 4, 5, 6, 9, 35, 40, 51, 57, 58, 59, 60 and 62.

B. *Recommendation for effecting economy* :
Serial No. 2, 8, 52, 53 and 59.

C. *Miscellaneous Recommendations* :
Serial No. 1, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 54, 55, 56, 61 and 62.

II. ANALYSIS OF THE RECOMMENDATIONS DIRECTED TOWARDS ECONOMY

| S. No. | S. No. as per summary of recommendations Appendix XI. | Particulars |
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| 1. | 2 | Work in the Forestry Wing being of technical nature, staffing pattern in the Wing should be reviewed to see that the administrative staff is reduced to the minimum. |
| 2. | 8 | The working of the Central Forestry Commission should be reviewed to suggest *inter alia* changes in the functions and the organisational set up of the Commission with a view to avoid over-lapping of functions already assigned to Forest Research Institute, Dehra Dun, etc. |
| 3. | 52 | Speedy steps should be taken to implement the recommendations made by the Second Expert Committee on Forest Research Institute & Colleges, Dehra Dun. |
| 4. | 53 | The programme and working of the Forest Research Laboratory, Bangalore, should be closely watched and facilities provided to make it an effective research Centre. |
| 5. | 59 | A thorough over-hauling of the existing administrative set up of the Indian Board for Wild Life be undertaken. |



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